Pioneer sound.vision.soul

Service Manual

ORDER NO.
CRT4117

CD RDS RECEIVER

DEH-P7000UB/X1PEW5

This service manual should be used together with the following manual(s) listed below. For the parts numbers, adjustments, etc. which are not shown in this manual, refer to the following manual(s).

Model No.	Order No.	Mech. Module	Remarks
DEH-P7000UB/XN/EW5	CRT4091		
CX-3240	CRT4050	S10.5COMP2-iPod/USB	CD Mech. Module : Circuit Descriptions, Mech. Descriptions, Disassembly

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS (USA) INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936

K-ZZZ. FEB. 2008 Printed in Japan

EXPLODED VIEWS AND PARTS LIST
PACKING(Page 32)
PACKING SECTION PARTS LIST

*:Non spare part

Mark	No.	Description	DEH-P7000UB/XN/EW	DEH-P7000UB/X1PEW5
	12	Polyethylene Bag	CEG1227	CEG-162
	13	Unit Box	CHG6391	CHG6404
	14	Contain Box	CHL6391	CHL6404
	25	Owner's Manual Assy	CXC9690	CXC9905

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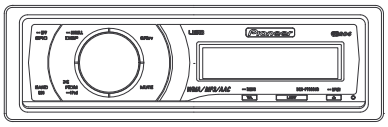
Service Manual



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For details, refer to "Important Check Points for Good Servicing".

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K-ZZY. DEC. 2007 Printed in Japan

SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer.
Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty.
If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

● **Safety Precautions for those who Service this Unit.**
When checking or adjusting the emitting power of the laser diode exercise caution in order to get safe, reliable results.

Caution:

1. **During repair or tests, minimum distance of 13 cm from the focus lens must be kept.**
2. **During repair or tests, do not view laser beam for 10 seconds or longer.**

CAUTION:
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION
This product contains a laser diode of higher class than 1. To ensure continued safety, do not remove any covers or attempt to gain access to the inside of the product.
Refer all servicing to qualified personnel.

En

WARNING!

The AEL (accessible emission level)of the laser power output is less than CLASS 1 but the laser component is capable of emitting radiation exceeding the limit for CLASS 1.
A specially instructed person should do servicing operation of the apparatus.

Laser diode characteristics
Wave length : 785 nm to 814 nm
Maximum output : 1 190 W(Emitting period : unlimited)

Additional Laser Caution

Transistors Q101 in PCB drive the laser diodes.
When Q101 is shorted between their terminals, the laser diodes will radiate beam.
If the top cover is removed with no disc loaded while such short-circuit is continued, the naked eyes may be exposed to the laser beam.

A

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replaced only with the same or equivalent type recommended by the manufacture.
Discord used batteries according to the manufacture's instructions.

B

C

D

E

F

[Important Check Points for Good Servicing]

In this manual, procedures that must be performed during repairs are marked with the below symbol.
Please be sure to confirm and follow these procedures.

1. Product safety

Please conform to product regulations (such as safety and radiation regulations), and maintain a safe servicing environment by following the safety instructions described in this manual.

① Use specified parts for repair.

Use genuine parts. Be sure to use important parts for safety.

② Do not perform modifications without proper instructions.

Please follow the specified safety methods when modification(addition/change of parts) is required due to interferences such as radio/TV interference and foreign noise.

③ Make sure the soldering of repaired locations is properly performed.

When you solder while repairing, please be sure that there are no cold solder and other debris.
Soldering should be finished with the proper quantity. (Refer to the example)

④ Make sure the screws are tightly fastened.

Please be sure that all screws are fastened, and that there are no loose screws.

⑤ Make sure each connectors are correctly inserted.

Please be sure that all connectors are inserted, and that there are no imperfect insertion.

⑥ Make sure the wiring cables are set to their original state.

Please replace the wiring and cables to the original state after repairs.
In addition, be sure that there are no pinched wires, etc.

⑦ Make sure screws and soldering scraps do not remain inside the product.

Please check that neither solder debris nor screws remain inside the product.

⑧ There should be no semi-broken wires, scratches, melting, etc. on the coating of the power cord.

Damaged power cords may lead to fire accidents, so please be sure that there are no damages.
If you find a damaged power cord, please exchange it with a suitable one.

⑨ There should be no spark traces or similar marks on the power plug.

When spark traces or similar marks are found on the power supply plug, please check the connection and advise on secure connections and suitable usage. Please exchange the power cord if necessary.

⑩ Safe environment should be secured during servicing.

When you perform repairs, please pay attention to static electricity, furniture, household articles, etc. in order to prevent injuries.
Please pay attention to your surroundings and repair safely.

2. Adjustments

To keep the original performance of the products, optimum adjustments and confirmation of characteristics within specification.
Adjustments should be performed in accordance with the procedures/instructions described in this manual.

3. Lubricants, Glues, and Replacement parts

Use grease and adhesives that are equal to the specified substance.
Make sure the proper amount is applied.

4. Cleaning

For parts that require cleaning, such as optical pickups, tape deck heads, lenses and mirrors used in projection monitors, proper cleaning should be performed to restore their performances.

5. Shipping mode and Shipping screws

To protect products from damages or failures during transit, the shipping mode should be set or the shipping screws should be installed before shipment. Please be sure to follow this method especially if it is specified in this manual.

CONTENTS

1. SERVICE PRECAUTIONS

1.1 SERVICE PRECAUTIONS

1. You should conform to the regulations governing the product (safety, radio and noise, and other regulations), and should keep the safety during servicing by following the safety instructions described in this manual.
2. Before disassembling the unit, be sure to turn off the power. Unplugging and plugging the connectors during power-on mode may damage the ICs inside the unit.
3. To protect the pickup unit from electrostatic discharge during servicing, take an appropriate treatment (shorting-solder) by referring to "the DISASSEMBLY".
4. After replacing the pickup unit, be sure to check the grating.
5. Be careful in handling ICs. Some ICs such as MOS type are so fragile that they can be damaged by electrostatic induction.
6. EJECT LOCK MODE for CD mechanism
   In order to enter "EJECT LOCK" mode, reset start while pressing the "DISP" and "BAND/ESC" keys together. Pressing the "DISP" and "BAND/ESC" keys until monitor backlight is turned on.
   In order to exit "EJECT LOCK" mode, follow the same steps to enter this mode.

1.2 NOTES ON SOLDERING

- For environmental protection, lead-free solder is used on the printed circuit boards mounted in this unit.
  Be sure to use lead-free solder and a soldering iron that can meet specifications for use with lead-free solders for repairs accompanied by reworking of soldering.

- Compared with conventional eutectic solders, lead-free solders have higher melting points, by approximately 40° C. Therefore, for lead-free soldering, the tip temperature of a soldering iron must be set to around 373°C in general, although the temperature depends on the heat capacity of the PC board on which reworking is required and the weight of the tip of the soldering iron.

Compared with eutectic solders, lead-free solders have higher bond strengths but slower wetting times and higher melting temperatures (hard to melt/easy to harden).

The following lead-free solders are available as service parts:

- Parts numbers of lead-free solder:
  GYP1006 1.0 in dia.
  GYP1007 0.6 in dia.
  GYP1008 0.3 in dia.

2. SPECIFICATIONS
2.1 SPECIFICATIONS

Specifications

General

Power source ..... 14.4 V DC (10.8 V to 15.1 V allowable)
Grounding system ..... Negative type
Max. current consumption ..... 10.0 A
Backup current ..... 6.0 mA or less
Dimensions (W × H × D):
DIN
Chassis ..... 180 mm × 50 mm × 165 mm
Nose ..... 188 mm × 58 mm × 18 mm
D
Chassis ..... 180 mm × 50 mm × 165 mm
Nose ..... 170 mm × 45 mm × 18 mm
Weight ..... 1.5 kg

Audio

Maximum power output ..... 50 W × 4
50 W × 2/4 Ω + 70 W × 1/2 Ω (for subwoofer)
Continuous power output .. 22 W × 4 (50 Hz to 15 000 Hz, 5% THD, 4 Ω load, both channels driven)
Load impedance ..... 4 Ω to 8 Ω × 4
4 Ω to 8 Ω × 2 + 2 Ω × 1
Preout max output level ..... 4 V
Equalizer (7-Band Graphic Equalizer):
Frequency ..... 50/125/315/800/2k/5k/12.5k Hz
Gain ..... ±12 dB
HPF:
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –12 dB/oct
Subwoofer (mono):
Frequency ..... 50/63/80/100/125 Hz
Slope ..... –18 dB/oct
Gain ..... +6 dB to –24 dB
Phase ..... Normal/Reverse
Bass boost:
Gain ..... +12 dB to 0 dB

CD player

System ..... Compact disc audio system
Usable discs ..... Compact disc
Signal-to-noise ratio ..... 94 dB (1 kHz) (IEC-A network)
Number of channels ..... 2 (stereo)
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio)
(Windows Media Player)
AAC decoding format ..... MPEG-4 AAC (iTunes® encoded only) (.m4a)
(Ver. 7.2 and earlier)
WAV signal format ..... Linear PCM & MS ADPCM (Non-compressed)

USB

Specification ..... USB 2.0 full speed
Supply current ..... 500 mA
Maximum amount of memory ..... 250 GB
File system FAT16, FAT32
MP3 decoding format ..... MPEG-1 & 2 Audio Layer 3
WMA decoding format ..... Ver. 7, 7.1, 8, 9, 10, 11 (2ch audio)
(Windows Media Player)
AAC decoding format ..... MPEG-4 AAC (iTunes® encoded only) (.m4a)
(Ver. 7.2 and earlier)
WAV signal format ..... Linear PCM & MS ADPCM (Non-compressed)

FM tuner

Frequency range ..... 87.5 MHz to 108.0 MHz
Usable sensitivity ..... 8 dBf (0.7 µV/75 Ω, mono, S/N: 30 dB)
Signal-to-noise ratio ..... 75 dB (IEC-A network)

MW tuner

Frequency range ..... 531 kHz to 1 602 kHz (9 kHz)
Usable sensitivity ..... 18 µV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

LW tuner

Frequency range ..... 153 kHz to 281 kHz
Usable sensitivity ..... 30 µV (S/N: 20 dB)
Signal-to-noise ratio ..... 65 dB (IEC-A network)

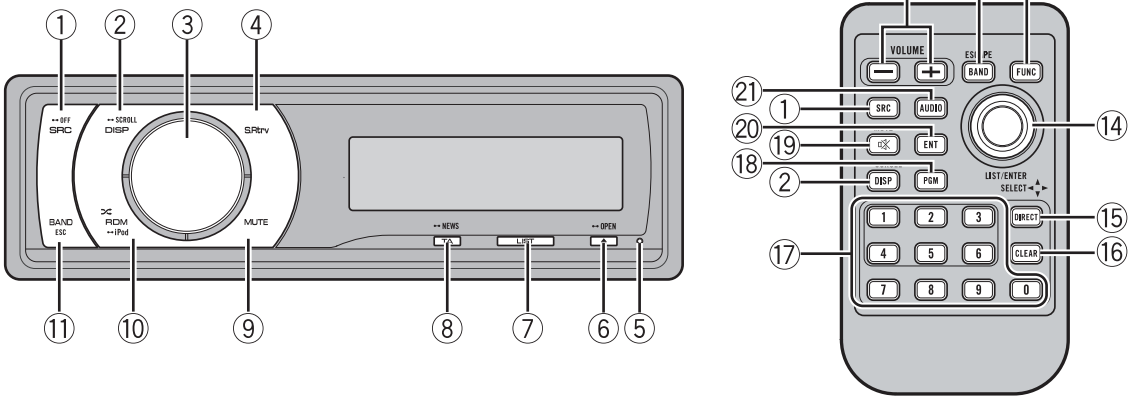
Note

Specifications and the design are subject to modifications without notice due to improvements. ■

5 6 7 8

2.2 DISC/CONTENT FORMAT

2.3 PANEL FACILITIES



What 's What

Head unit

① SRC/OFF button
This unit is turned on by selecting a source.
Press to cycle through all the available sources.

② DISP/SCROLL button
Press to select different displays.
Press and hold to scroll the text information.

③ MULTI-CONTROL
Move to perform manual seek tuning, fast forward, reverse and track search controls.
Also used for controlling functions.
Turn to increase or decrease the volume.

④ S.Rtrv button
Press to switch Sound Retriever settings.

⑤ RESET button
Press to reset the microprocessor.

⑥ EJECT/OPEN button
Press to eject a CD from your built-in CD player.
Press and hold to open or close the front panel.

⑦ LIST button
Press to display the disc title list, track title list, folder list, file list or preset channel list depending on the source.

⑧ TA/NEWS button
Press to turn TA function on or off. Press and hold to turn NEWS function on or off.

⑨ MUTE button
Press to turn off the sound. To turn on the sound, press again.

⑩ RDM/⤮/iPod button
Press to turn random function on or off while using CD or USB.
While using iPod, press this button to shuffle all tracks.
Press and hold to switch the control mode while using an iPod connected USB connector of this unit.
If using the iPod with an interface adapter (CD-IB100II), press to switch the shuffle function.

⑪ BAND/ESC button
Press to select among three FM bands and MW/LW bands.
Press to return to the ordinary display when operating menu.

Remote control

Operation is the same as when using the buttons on the head unit.

⑫ VOLUME buttons
Press to increase or decrease the volume.

⑬ FUNCTION button
Press to select functions.

⑭ Thumb pad
Move to perform manual seek tuning, fast forward, reverse and track search controls. Also used for controlling functions. Functions are the same as MULTI-CONTROL except for volume control.
Press to display the disc title list, track title list, folder list, file list or preset channel list depending on the source.

⑮ DIRECT button
Press to directly select the desired track.

⑯ CLEAR button
Press to cancel the input number when 0 to 9 are used.

⑰ 0 to 9 buttons
Press to directly select the desired track, preset tuning or disc. Buttons 1 to 6 can operate the preset tuning for the tuner or disc number search for the multi-CD player.

⑱ PGM button
Press to operate the preprogrammed functions for each source.

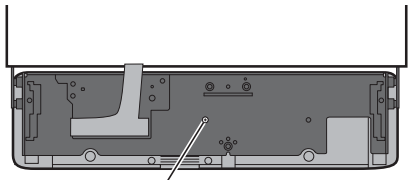
⑲ MUTE button
Press to turn off the sound. To turn on the sound, press again.

⑳ ENT button
Press to change to the entertainment display.

㉑ AUDIO button
Press to select various sound quality controls. ▣

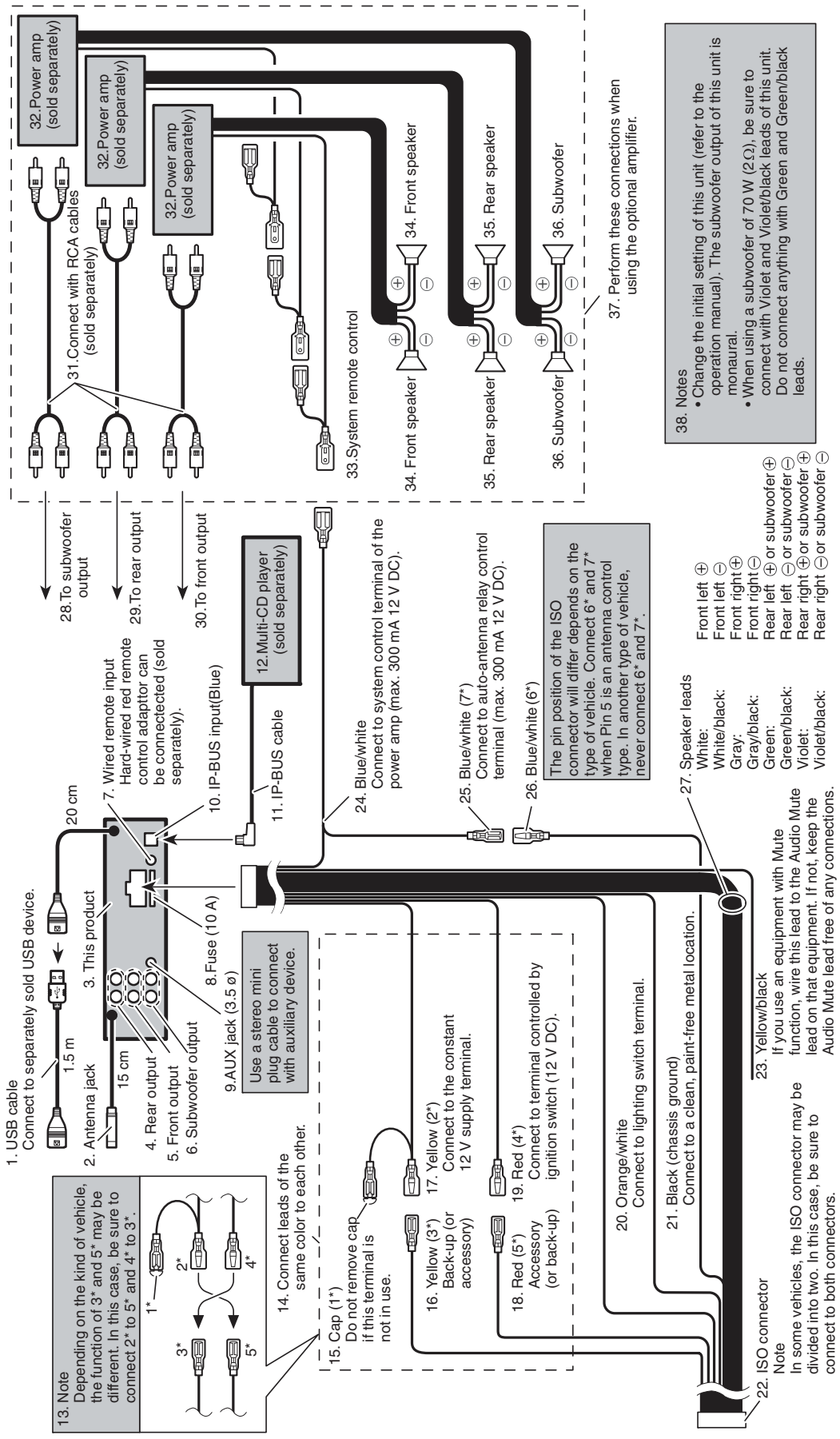
Fastening the front panel

If you do not plan to detach the front panel, the front panel can be fastened with supplied screw.



Screw
JPZ20P060FTB

2.4 CONNECTION DIAGRAM



3. BASIC ITEMS FOR SERVICE

3.1 CHECK POINTS AFTER SERVICING

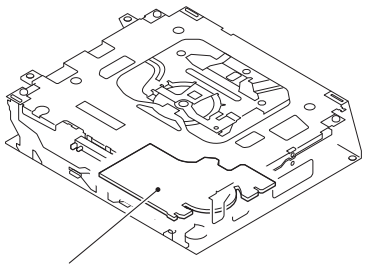
To keep the product quality after servicing, please confirm following check points.

No.		Procedures	Item to be confirmed
1		Confirm whether the customer complain has been solved. If the customer complain occurs with the specific media, use it for the operation check.	The customer complain must not be reappeared. Display, audio and operations must be normal.
2	CD	Play back a CD. (Track search)	No malfunction on display, audio and operation. Display, audio and operations must be normal.
3	FM/AM tuner	Check FM/AM tuner action. (Seek, Preset) Switch band to check both FM and AM.	Display, audio and operations must be normal.
4		Check whether no disc is inside the product.	The media used for the operating check must be ejected.
5		Appearance check	No scratches or dirt on its appearance after receiving it for service.

See the table below for the items to be checked regarding audio:

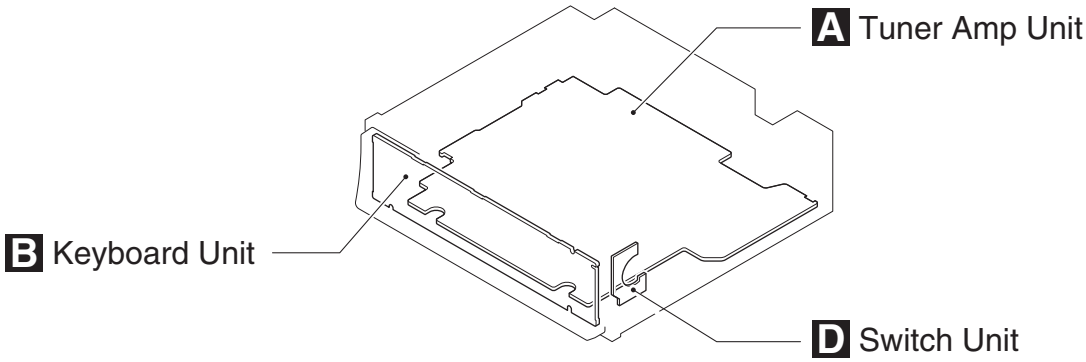
Item to be checked regarding audio
Distortion
Noise
Volume too low
Volume too high
Volume fluctuating
Sound interrupted

3.2 PCB LOCATIONS



C CD Core Unit
(S10.5COMP2-iPod)

Unit Number : CWN3147
Unit Name : Tuner Amp Unit
Unit Number :
Unit Name : Keyboard Unit
Unit Number : CWX3526
Unit Name : CD Core Unit
(S10.5COMP2-iPod)
Unit Number : CWS1389
Unit Name : Switch Unit



3.3 JIGS LIST

● **Jigs List**

Name	Jig No.	Remarks
Test Disc	TCD-782	Checking the grating
L.P.F.		Checking the grating (Two pieces)

● **Grease List**

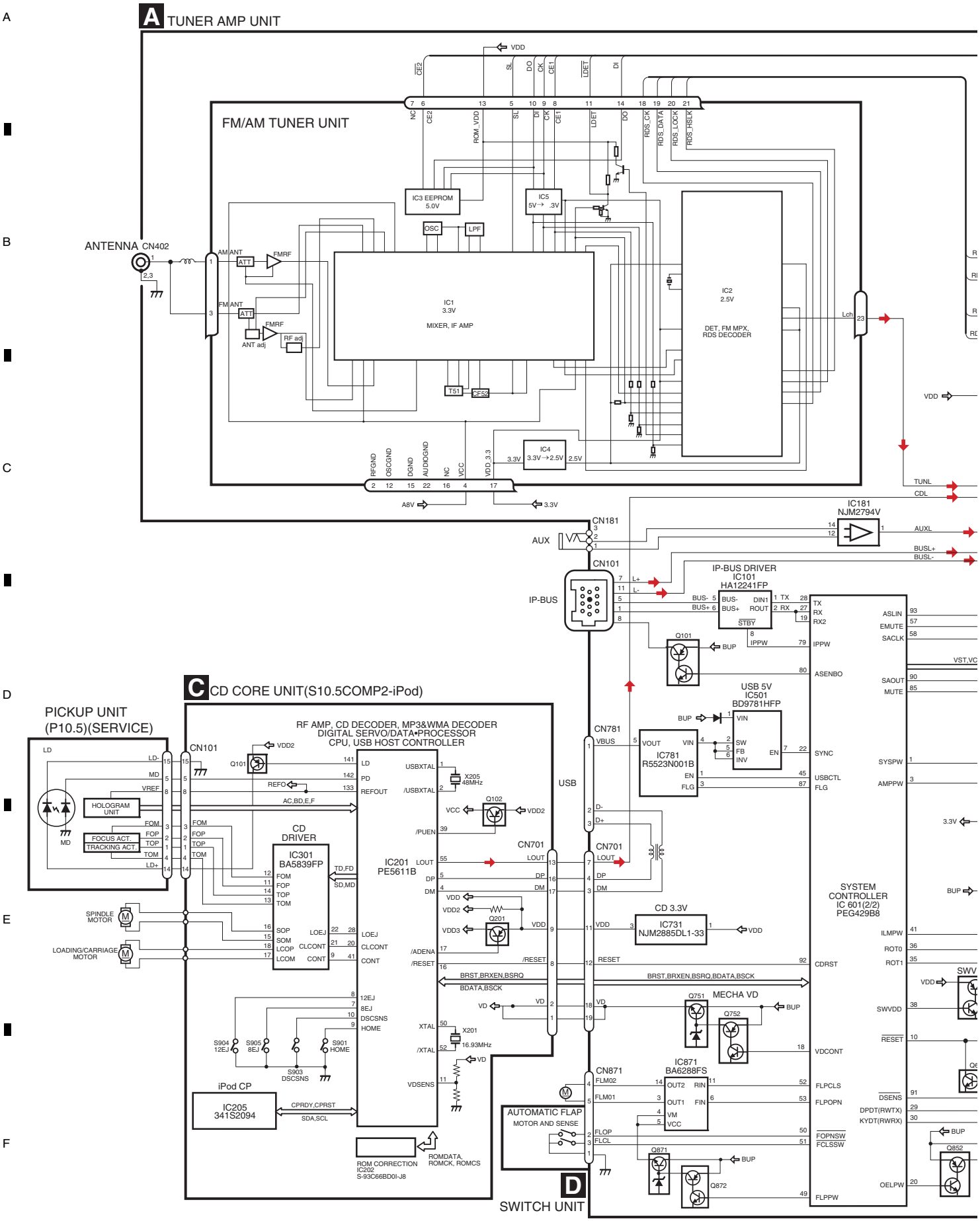
Name	Grease No.	Remarks
Grease	GEM1024	Drive Unit , CD Mechanism Module
Grease	GEM1041	Drive Unit
Grease	GEM1045	CD Mechanism Module
Grease	GEM1069	Drive Unit

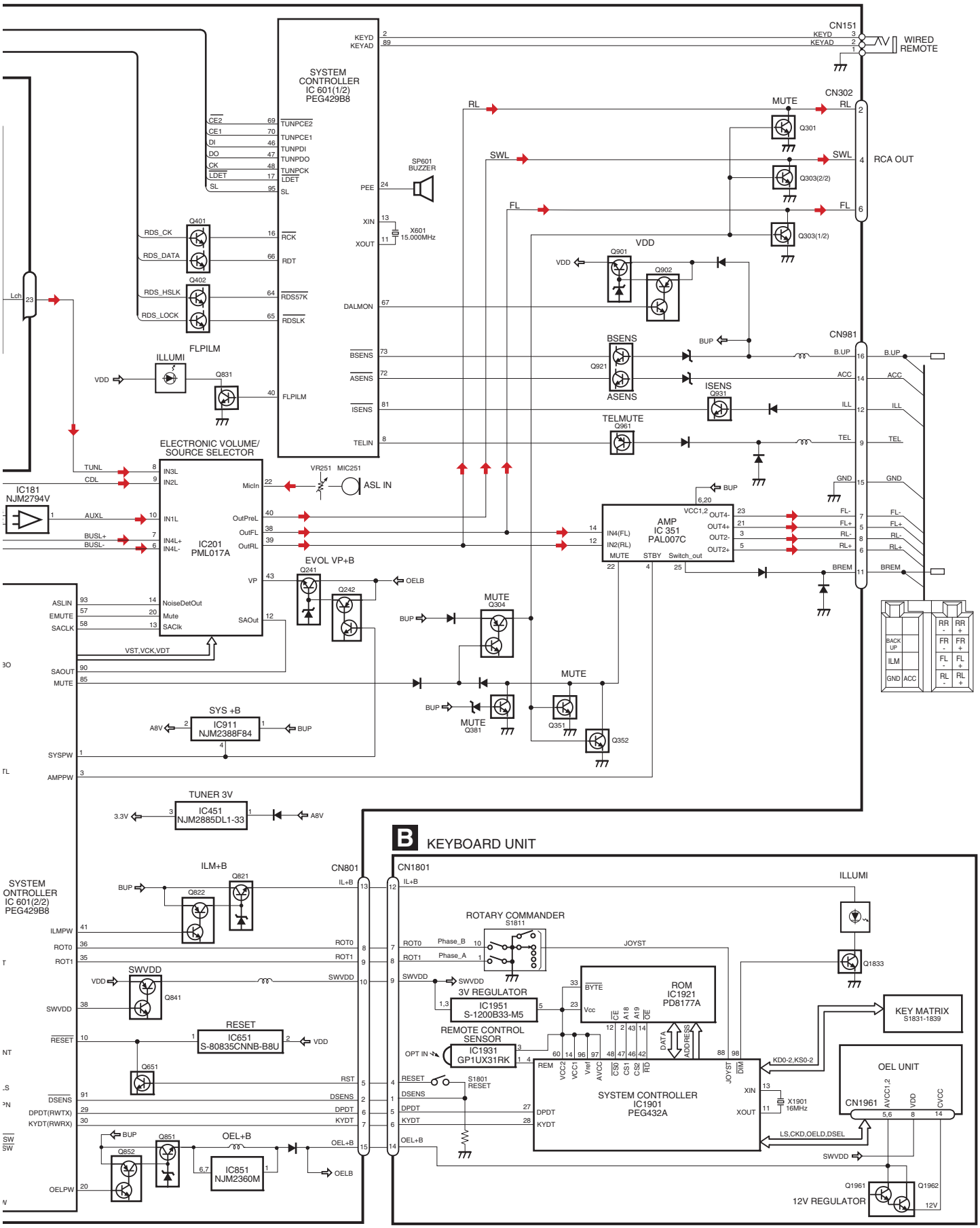
3.4 CLEANING

Before shipping out the product, be sure to clean the following portions by using the prescribed cleaning tools:

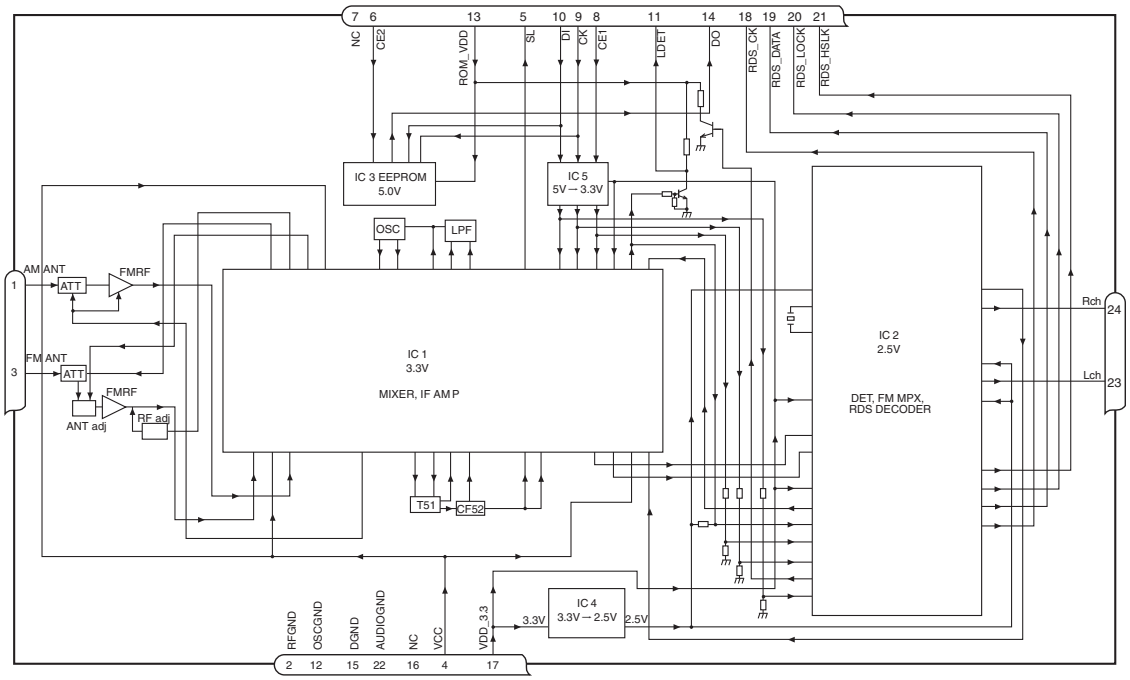
Portions to be cleaned	Cleaning tools
CD pickup lenses	Cleaning liquid : GEM1004 Cleaning paper : GED-008

4. BLOCK BIAGRAM




SYSTEM CONTROLLER IC 601(1/2) PEG429B8
CN151
KEYD
KEYAD
WIRED REMOTE
CN302
RL
SWL
FL
MUTE
RCA OUT
Q301
Q303(2/2)
Q303(1/2)
SP601 BUZZER
X601 15.000MHz
VDD
Q901
Q902
CN981
B.UP
ACC
ILL
TEL
GND
BREM
BSENS
ASENS
ISENS
Q921
Q931
TELMUTE
Q961
ELECTRONIC VOLUME/ SOURCE SELECTOR
IC201 PML017A
IC181 NJM2794V
VR251
MIC251
ASL IN
AMP IC 351 PAL007C
EVOL VP+B
Q241
Q242
OELB
MUTE
Q304
Q381
Q351
Q352
SYS +B
IC911 NJM2388F84
TUNER 3V
IC451 NJM2885DL1-33
Q401
Q402
RDS_CK
RDS_DATA
RDS_HSLK
RDS_LOCK
FLPILM
ILLUMI
Q831
Lch
CE2
CE1
DI
DO
CK
LDET
SL
TUNPCE2
TUNPCE1
TUNPDI
TUNPDO
TUNPCK
PEE
XIN
XOUT
DALMON
RCK
RDT
RDS57K
RDSLK
TUNL
CDL
AUXL
BUSL+
BUSL-
ASLIN
EMUTE
SACLK
SAOUT
VST,VCK,VDT
SYSPW
AMPPW
SYSTEM ONTROLLER IC 601(2/2) PEG429B8
ILM+B
Q821
Q822
SWVDD
Q841
RESET
IC651 S-80835CNNB-B8U
Q651
DSENS
DPDT(RWTX)
KYDT(RWRX)
OEL+B
Q851
Q852
IC851 NJM2360M
OELPW
CN801
B
KEYBOARD UNIT
CN1801
ROTARY COMMANDER
S1811
Phase_B
Phase_A
JOYST
ILLUMI
Q1833
3V REGULATOR
IC1951 S-1200B33-M5
ROM IC1921 PD8177A
KEY MATRIX
S1831-1839
REMOTE CONTROL SENSOR
IC1931 GP1UX31RK
OPT IN
S1801 RESET
SYSTEM CONTROLLER IC1901 PEG432A
KD0-2,KS0-2
OEL UNIT
CN1961
X1901 16MHz
LS,CKD,OELD,DSEL
12V REGULATOR
Q1961
Q1962

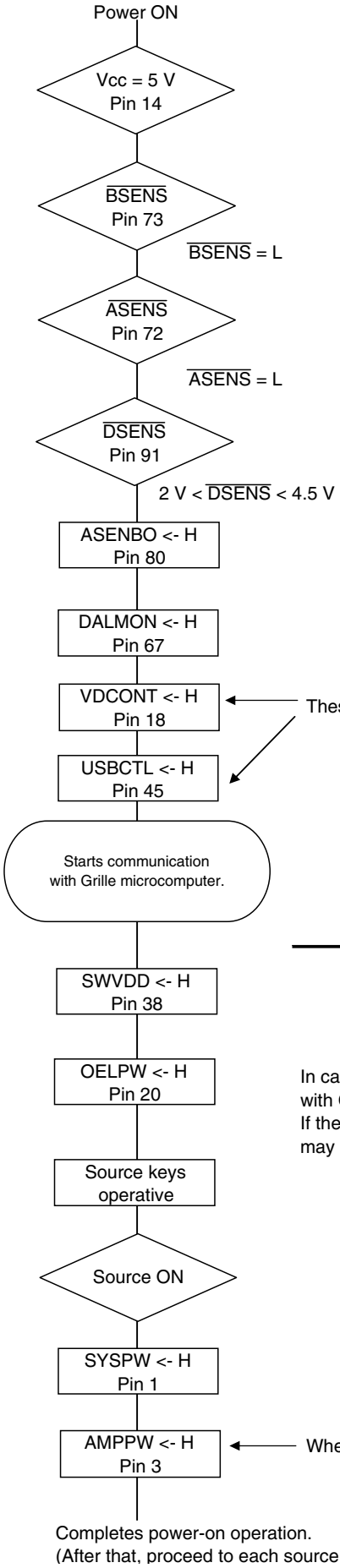
● FM/AM Tuner Unit



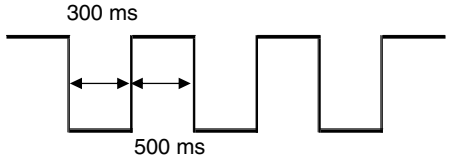
No.	Symbol	I/O	Explain	
1	AMANT	I	AM antenna input	AM antenna input high impedance AMANT pin is connected with an all antenna by way of 4.7 µH. (LAU type inductor) A series circuit including an inductor and a resistor is connected with RF ground for the countermeasure against the hum of power transmission line.
2	RFGND		RF ground	Ground of antenna block
3	FMANT	I	FM antenna input	Input of FM antenna 75 Ω Surge absorber(DSP-201M-S00B)is necessary.
4	VCC		power supply	The power supply for analog block. D.C 8.4 V ± 0.3 V
5	SL	O	signal level	Output of FM/AM signals level
6	CE2	I	chip enable-2	Chip enable for EEPROM ”Low” active input
7	NC		non connection	Not used
8	CE1	I	chip enable-1	Chip enable for AF•RF ”High” activev input
9	CK	I	clock	Clock input
10	DI	I	data in	Data input
11	LDET	O	lock detector	“Low” active output
12	OSCGND		osc ground	Ground of oscillator block
13	ROM_VDD		power supply	Power supply for EEPROM pin 13 is connected with a power supply of micro computer.
14	DO	O	data out	Data output
15	DGND		digital ground	Ground of digital block
16	NC		non connection	Not used
17	VDD_3.3		power supply	The power supply for digital block. 3.3 V ± 0.2 V
18	RDS_CK	O	RDS clock	Output of RDS clock(2.5 V)
19	RDS_DATA	O	RDS data	Output of RDS data(2.5 V)
20	RDS_LOCK	O	RDS lock	Output unit “High” active(2.5 V) (RDS_LOCK turns over by the external transistor . “Low” active)
21	RDS_HSLK	O	RDS high speed lock	Output unit “High” active(2.5 V)(RDS_HSLK turns over by the external transistor. “Low” active)
22	AUDIOGND		audio ground	Ground of audio block
23	L ch	O	L channel output	FM stereo “L-ch” signal output or AM audio output
24	R ch	O	R channel output	FM stereo “R-ch” signal output or AM audio output

5. DIAGNOSIS

5.1 OPERATIONAL FLOWCHART



These terminals cause trouble that CDS, USB, and the iPod source do not stand up.



In case of the above signal, the communication with Grille microcomputer may fai
If the time interval is not 300 / 500 msec, the oscillator may be defective.

Whenever an external amplifier is connected, AMPPW becomes Low.

5.2 ERROR CODE LIST

● Error Messages

If a CD is not operative or stopped during operation due to an error, the error mode is turned on and cause(s) of the error is indicated with a corresponding number. This arrangement is intended at reducing nonsense calls from the users and also for facilitating trouble analysis and repair work in servicing.

(1) Basic Indication Method

1) When SERRORM is selected for the CSMOD (CD mode area for the system), error codes are written to DMIN (minutes display area) and DSEC (seconds display area). The same data is written to DMIN and DSEC. DTNO remains in blank as before.

2) Head unit display examples

Depending on display capability of LCD used, display will vary as shown below. xx contains the error number.

8-digit display	6-digit display	4-digit display
ERROR-xx	ERR-xx	E-xx

(2) Error Code List

Code	Class	Displayed error code	Description of the code and potential cause(s)
10	Electricity	Carriage Home NG SERVO LSI Communication Error	CRG can't be moved to inner diameter. CRG can't be moved from inner diameter. -> Failure on home switch or CRG move mechanism. Communication error between microcomputer and SERVO LSI.
11	Electricity	Focus Servo NG	Focusing not available. -> Stains on rear side of disc or excessive vibrations on REWRITABLE.
12	Electricity	Spindle Lock NG Subcode NG	Spindle not locked. Sub-code is strange (not readable). -> Failure on spindle, stains or damages on disc, or excessive vibrations. A disc not containing CD-R data is found. Turned over disc are found, though rarely. CD signal error.
17	Electricity	Setup NG	AGC protection doesn't work. Focus can be easily lost. -> Damages or stains on disc, or excessive vibrations on REWRITABLE.
30	Electricity	Search Time Out	Failed to reach target address. -> CRG tracking error or damages on disc.
44	Electricity	ALL Skip	Skip setting for all track. (CD-R/RW)
50	Mechanism	CD On Mech Error	Mechanical error during CD ON. -> Defective loading motor, mechanical lock and mechanical sensor.
A0	System	Power Supply NG	Power (VD) is ground faulted. -> Failure on SW transistor or power supply (failure on connector).

Remarks: Mechanical errors are not displayed (because a CD is turned off in these errors).

Unreadable TOC does not constitute an error. An intended operation continues in this case.

Upper digits of an error code are subdivided as shown below:

1x: Setup relevant errors, 3x: Search relevant errors, Ax: Other errors.

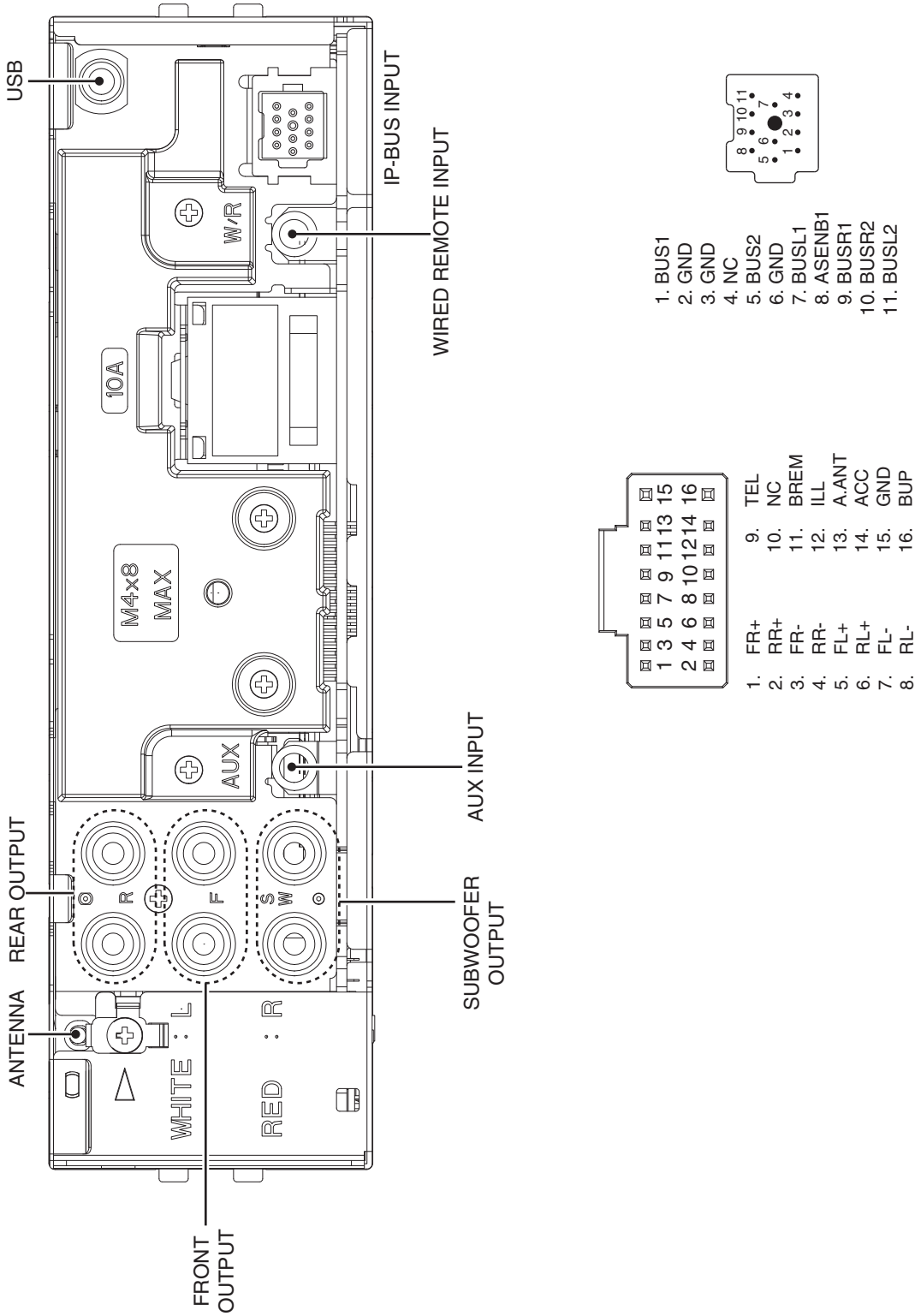
iPod error

Message	Cause	Action
NO SONGS	No songs in the iPod	Transfer the songs to the iPod.
STOP	No songs in the current list	Select a list that contains the songs.
ERROR-19	Communication failure iPod failure	Disconnect the cable from the iPod. Once the iPod main menu is displayed, connect the cable again.
		Reset the iPod.
ERROR-18 N/A USB	Old version of the iPod	Update the iPod version.
	iPod failure	Reset the iPod.
ERROR-16	Old version of the iPod	Update the iPod version.
	iPod failure	Disconnect the cable from the iPod. Once the iPod main menu is displayed, connect the cable again.
		Reset the iPod.
		Turn the ignition switch OFF and ON.
		Malfunction of iPod recognition IC.
CHECK USB	iPod is not charged but operates correctly.	Check if the connection cable for the iPod shorted out. After checking, switch the ignition key OFF and ON, or disconnect the iPod and connect again.

USB error

Message	Cause	Action
NO AUDIO	No songs in the USB device	Transfer the songs to the USB device.
	USB memory with security enabled is connected	Follow the USB memory instructions to disable the security.
TRK SKIPPED	The connected USB device contains WMA files that are protected by DRM	Play an audio file not protected by DRM.
PROTECT	All the files in the USB device are protected by DRM	Transfer the songs not protected by DRM to the USB device.
N/A USB	The connected USB device is not supported by this unit	Connect a USB device that is compliant as a Mass Storage Class.
CHK USB	The USB connector or the USB cable is short-circuited	Confirm the USB connector or the USB cable.
	The connected USB device consumes more than 500 mA (max. allowable current)	Confirm the USB device.
ERROR-19	Communication failure	Turn the ignition switch OFF and ON.
		Disconnect the USB device, and connect it again.
		Change to a different source. Then, return to the USB.
ERROR-23	USB device is not formatted with FAT16 or FAT32	Format the USB device with FAT16 or FAT32.

5.3 CONNECTOR FUNCTION DESCRIPTION



6. SERVICE MODE

6.1 TEST MODE

Double Key Allocation List

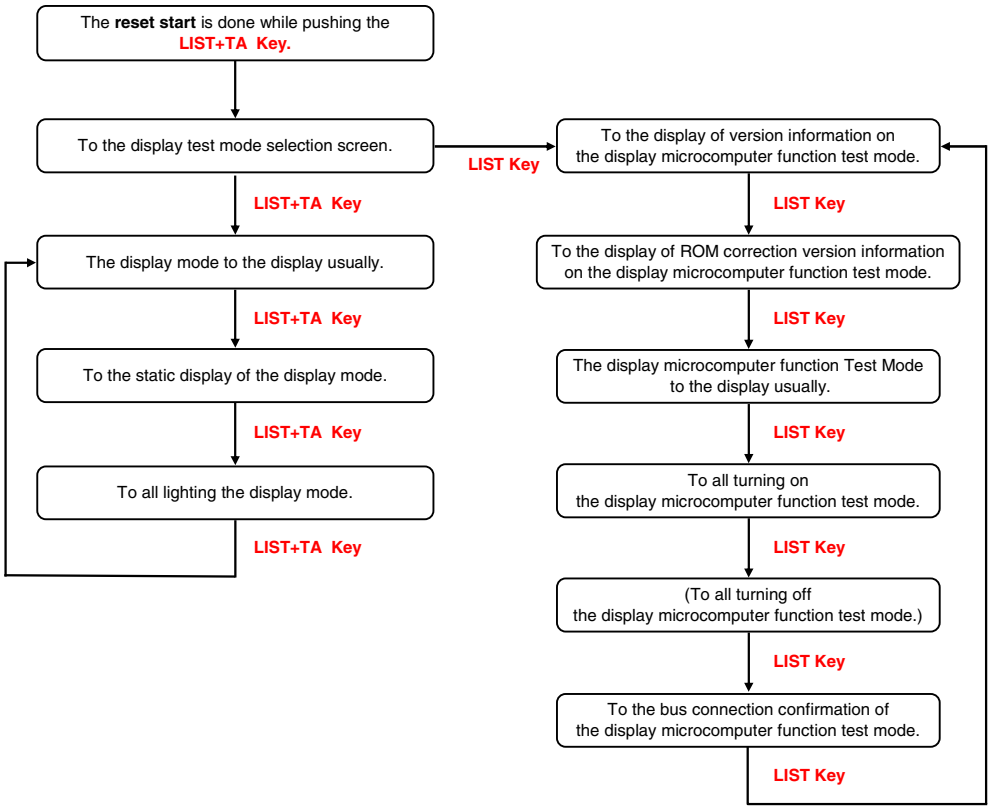
Double Key	Mode Name
S.Rtrv + DISP	CD Test Mode
LIST + TA	Display Test Mode
DISP + BAND/ESC	(Eject Lock)

The mode in ( ) is except test mode.

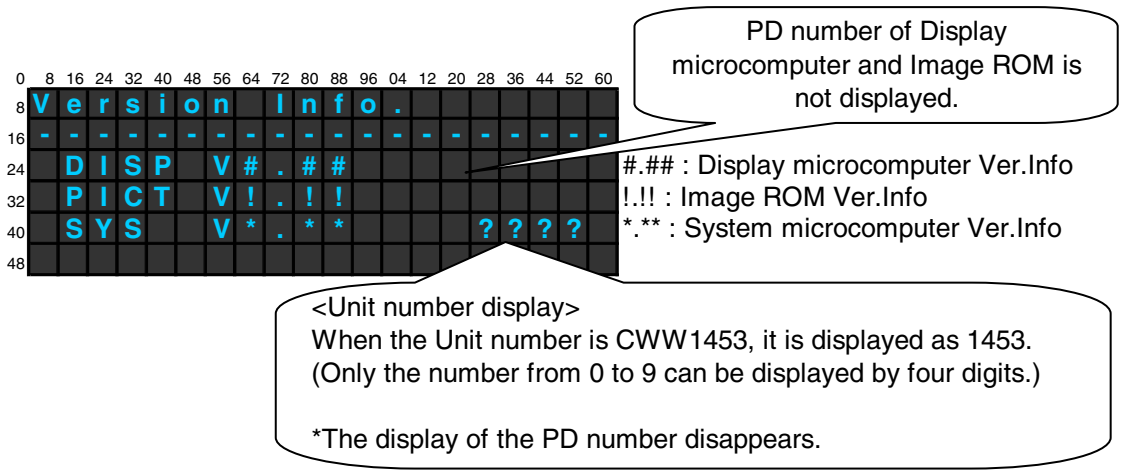
6.2 DISPLAY TEST MODE

Display Test Mode

Restarted pushing reset while pushing the **LIST+TA key** then the screen is changed to the display test mode.

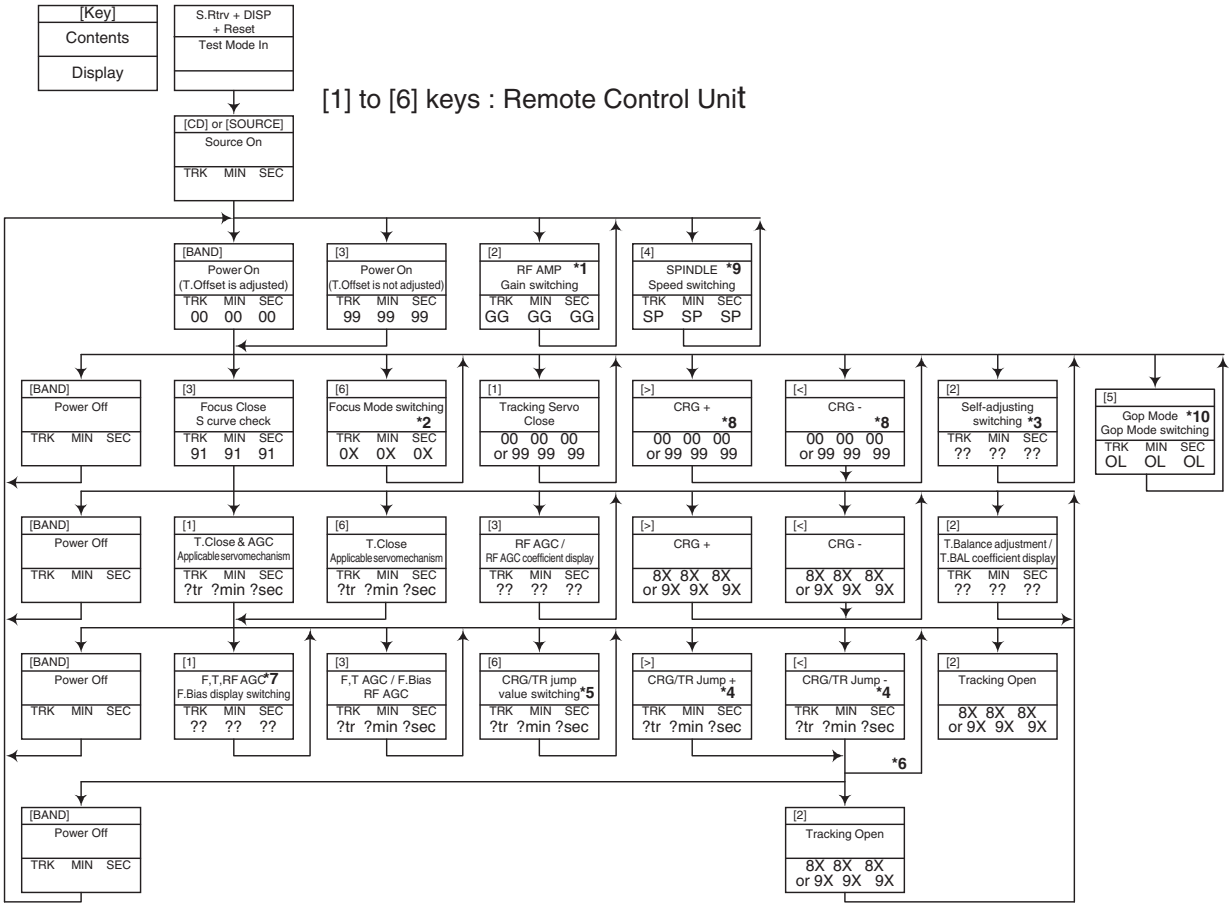


Version Information Display



6.3 CD TEST MODE

● Flow Chart



*1) TYP (TRK MIN SEC) -> + 6 dB ($^{TRK}06^{MIN}06^{SEC}06$) -> + 12 dB ($^{TRK}12^{MIN}12^{SEC}12$)

*2) Focus Close ($^{TRK}00^{MIN}00^{SEC}00$) -> S.Curve ($^{TRK}01^{MIN}01^{SEC}01$) -> F EQ measurement setting ($^{TRK}02^{MIN}02^{SEC}02$)
($^{TRK}99^{MIN}99^{SEC}99$)

*3) F.Offset Display -> RF.Offset -> T.Offset Display -> Switch to the order of the original display

*4) 1TR/4TR/10TR/32TR/100TR

*5) Single -> 4TR -> 10TR -> 32TR -> 100TR -> CRG Move
9x(8x):91(81) 92(82) 93(83) 94(84) 95(85) 96(86)

*6) Only at the time of CRG move, 100TR jump

*7) TRK/MIN/SEC -> F.AGC -> T.AGC Gain -> F Bias -> RF AGC

*8) CRG motor voltage = 2 [V]

*9) TYP (1X) (TRK MIN SEC) -> 2X ($^{TRK}22^{MIN}22^{SEC}22$) -> 1X ($^{TRK}11^{MIN}11^{SEC}11$)

*10) OFF(TYP) (TRK MIN SEC) -> FORCUS ($^{TRK}70^{MIN}70^{SEC}70$) -> TRACKING ($^{TRK}71^{MIN}71^{SEC}71$)

[Key]	Operation Test Mode
[BAND]	Power On/Off
[>]	CRG + / TR Jump + (Direction of the external surface)
[<]	CRG - / TR Jump - (Direction of the internal surface)
[1]	T. CLS & AGC & Applicable servomechanism / AGC,AGC display setting
[2]	RF Gain switching / Offset adjustment display / T.Balance adjustment / T. Open
[3]	F. Close,S Curve / Rough Servo and RF AGC / F,T,RF AGC
[4]	SPDL 1X/2X switching As for the double speed(2x), audio output cannot be supported.
[5]	Error Rate measurement ON : ERR 30 Counts Start BER display data[%]
[6]	F. Mode switching / Tracking Close / CRG•TR Jump Switching

- As for the double speed (2x), audio output cannot be supported
- After the [Eject] key is pressed keys other than the [Eject] key should not be pressed, until disc ejection is complete.
- When the key [2] or [3] is pressed during the Focus Search, the power supply should be immediately turned off (otherwise the lens sticks to Wall, causing the actuator to be damaged).
- In the case of TR jump other than to 100TR, the function shall continue to be processed even if the TR jump key is released. As for the CRG Move and 100TR Jump, the mechanism shall be set to the Tracking Close mode when the key is released.
- When the power is turned on/off the jump mode is reset to the Single TR (91) while the gain of the RFAMP is reset to 0 dB. At the same time all the self-adjusting values shall return to the default setting.

7. DISASSEMBLY

● Removing the Keyboard Unit (Fig.1, 2)

Remove the Knob Unit.(Fig.1)

1 Remove the four screws.(Fig.2)

Remove the Cover
and then remove the Keyboard Unit.

Fig.1

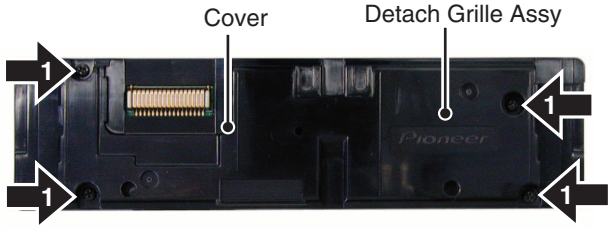


Fig.2

● Removing the Holder, Panel and Case (Fig.3)

Take off the pick of left and right
and then a Holder slide to the arrow course.

Remove the Panel.

Remove the Case.

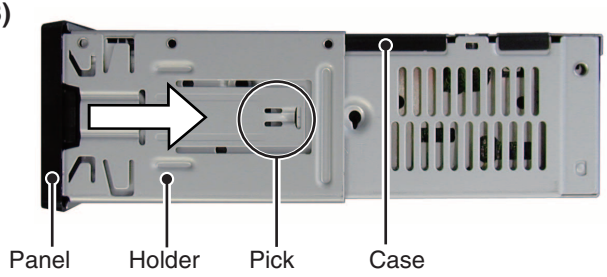


Fig.3

● Removing the CD Mechanism Module (Fig.4)

1 Remove the four screws.

Disconnect the cable
and then remove the CD Mechanism Module.

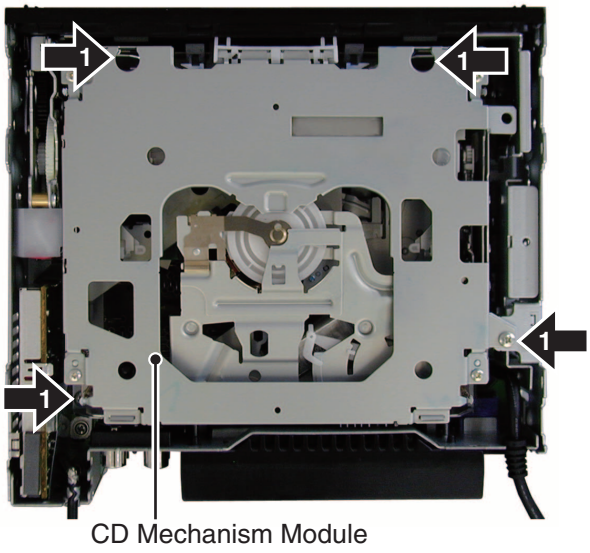


Fig.4

● Removing the Panel Assy(Fig.5, 6, 7)

Disconnect the two cables.(Fig.5)

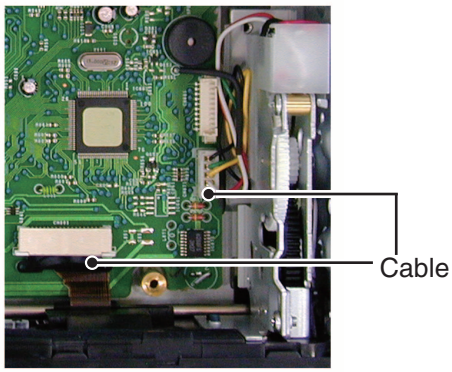


Fig.5

Follw next

The continuance from the page of before.

1 Remove the four screws.(Fig.6)

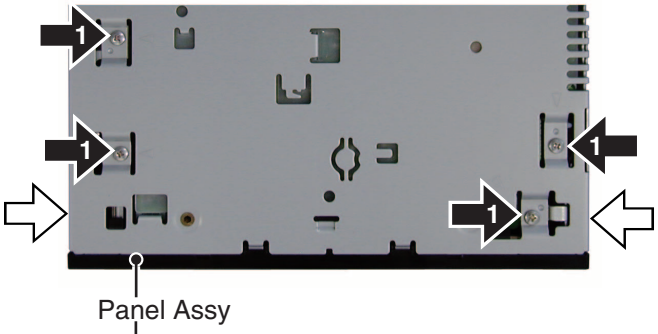


Fig.6

Push the place of the arrows
and then remove the Panel Assy.(Fig.6, 7)

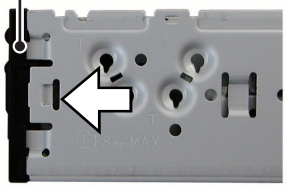


Fig.7

● Removing the Switch Unit(Fig.8, 9)

1 Remove the screw.(Fig.8)

2 Remove the three screws
and then the Holder.(Fig.8)

3 Remove the two screws
and then remove the Switch Unit.(Fig.9)

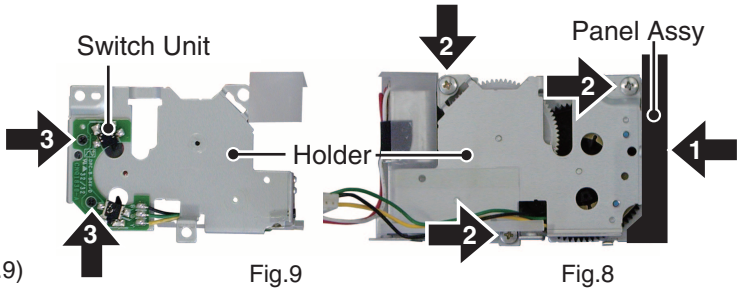


Fig.9 Fig.8

● Removing the Tuner Amp Unit(Fig.10, 11)

1 Remove the screw
and then remove the Holder.(Fig.10)

2 Remove the screw.(Fig.10)

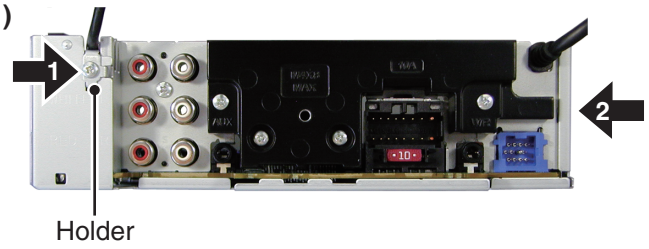


Fig.10

3 Remove the screws.(Fig.11)

4 Remove the screw
and then remove the Holder.(Fig.11)

5 Straighten the tabs at three locations
indicated
and then remove the Tuner Amp Unit.
(Fig.11)

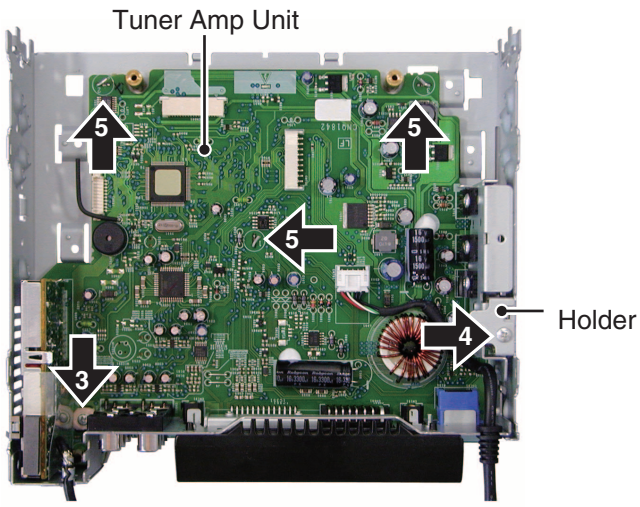
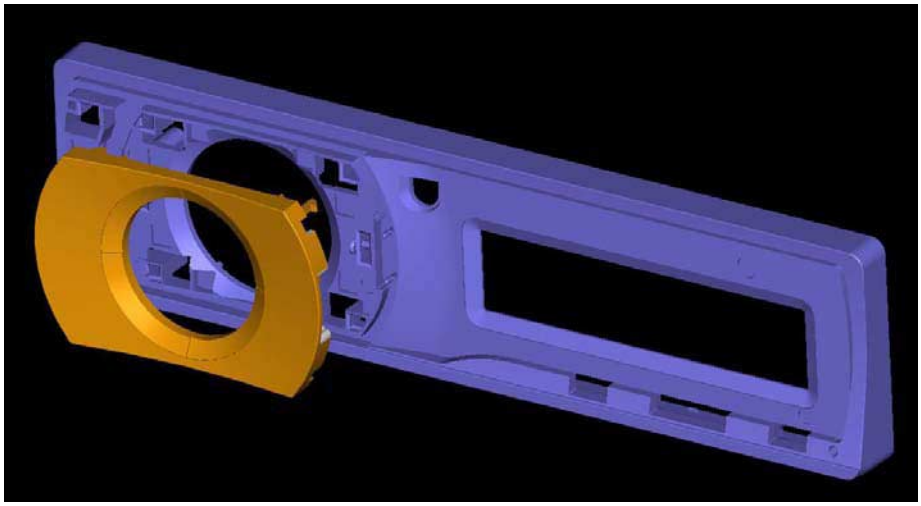
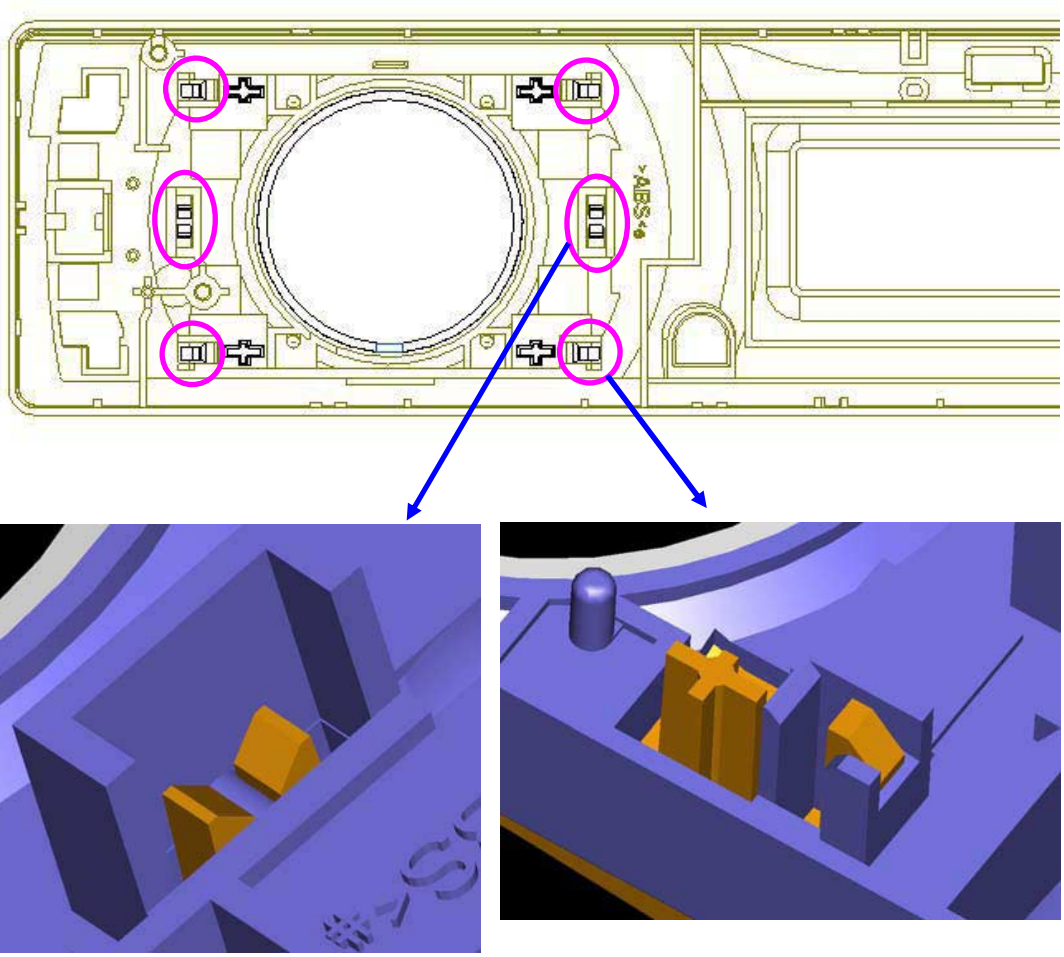


Fig.11

●How from grille to remove plate button.



①There are six hooks to remove.

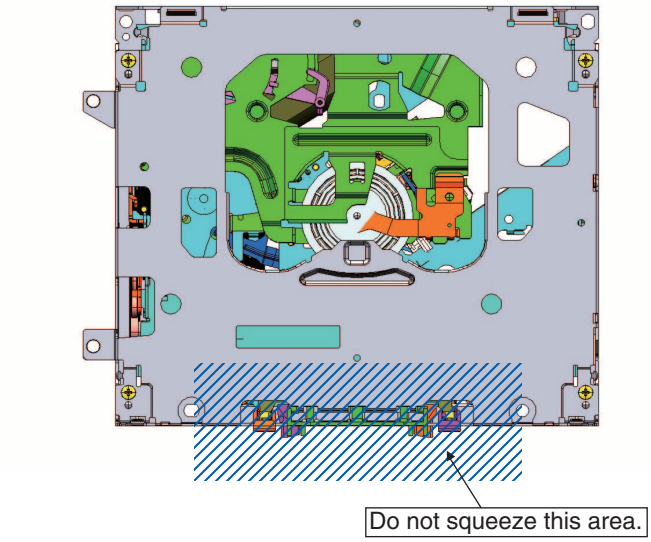


The hook in six places in total is removed by the thin one such as tweezers.

* The hook breaks when forcibly removing.

● How to hold the Mechanism Unit

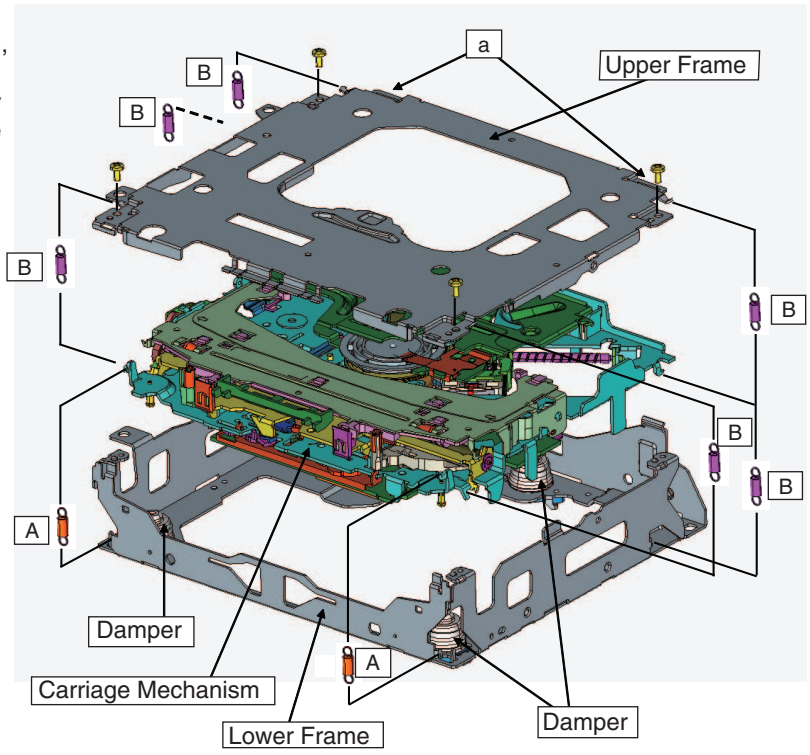
1. Hold the Upper and Lower Frames.
2. Do not hold the front portion of the Upper Frame, because it is not very solid.



● Removing the Upper and Lower Frames

1. With a disc inserted and clamped in the mechanism, remove the two Springs (A), the six Springs (B), and the four Screws.
2. Turn the Upper Frame using the part "a" as a pivot, and remove the Upper Frame.
3. While lifting the Carriage Mechanism, remove it from the three Dampers.

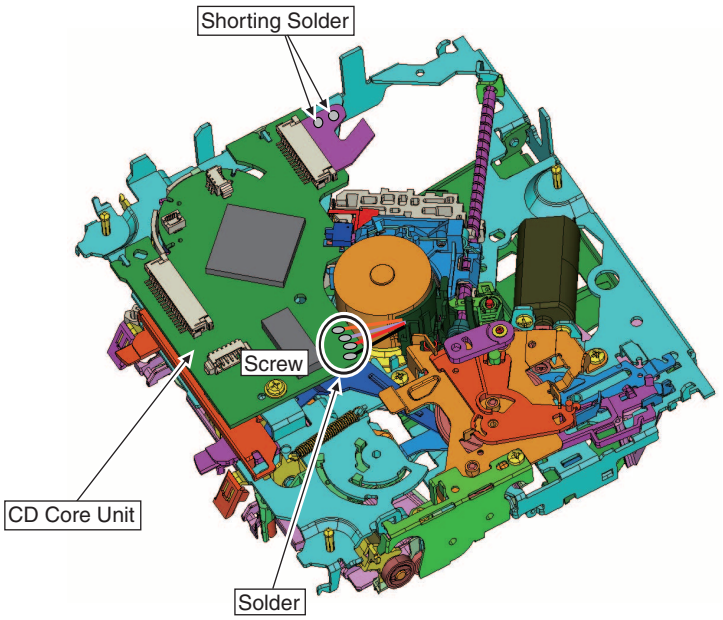
Caution: When assembling, be sure to apply some alcohol to the Dampers and assemble the mechanism in a clamped state.



● How to remove the CD Core Unit

1. Apply Shorting Solder to the flexible cable of the Pickup, and disconnect it from the connector.
2. Unsolder the four leads, and loosen the Screw.
3. Remove the CD Core Unit.

Caution: When assembling the CD Core Unit, assemble it with the SW in a clamped state so as not to damage it.

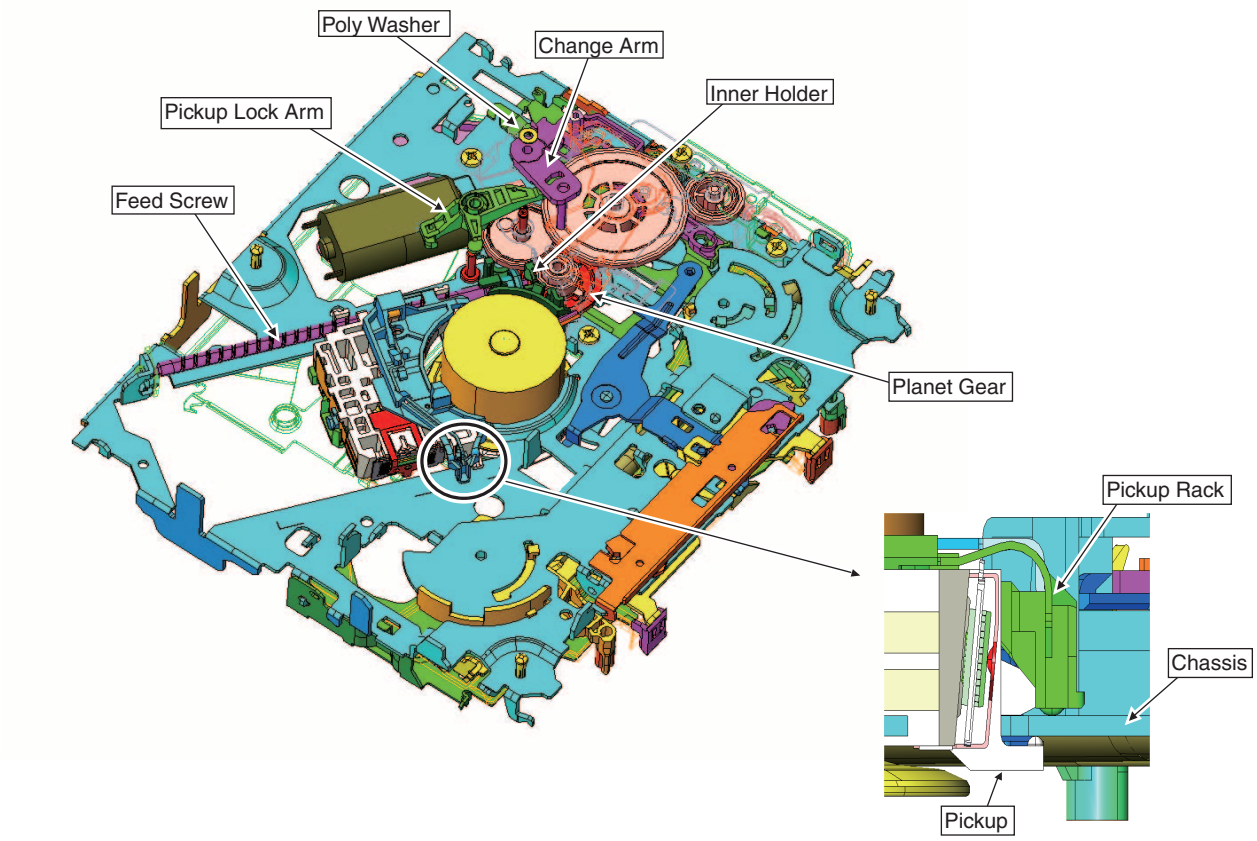


● How to remove the Pickup Unit

1. Make the system in the carriage mechanism mode, and have it clamped.
2. Remove the CD Core Unit and remove the leads from the Inner Holder.
3. Remove the Poly Washer, Change Arm, and Pickup Lock Arm.
4. While releasing from the hook of the Inner Holder, lift the end of the Feed Screw.

Caution: When assembling, move the Planet Gear to the load/eject position before setting the Feed Screw in the Inner Holder.

Assemble the sub unit side of the Pickup, taking the plate (Chassis) in-between. When treating the leads of the Load Carriage Motor Assy, do not make them loose over the Feed Screw.



8. EACH SETTING AND ADJUSTMENT
8.1 CD ADJUSTMENT

1) Cautions on adjustments
• In this product the single voltage (3.3 V) is used for the regulator. The reference voltage is the REFO1 (1.65 V) instead of the GND.
If you should mistakenly short the REFO1 with the GND during adjustment, accurate voltage will not be obtained, and the servo's misoperation will apply excessive shock to the pickup. To avoid such problems:
a. Do not mix up the REFO1 with the GND when connecting the (-) probe of measuring instruments. Especially on an oscilloscope, avoid connecting the (-) probe for CH1 to the GND.
b. In many cases, measuring instruments have the same potential as that for the (-) probe. Be sure to set the measuring instruments to the floating state.
c. If you have mistakenly connected the REFO1 to the GND, turn off the regulator or the power immediately.

• Before mounting and removing filters or leads for adjustment, be sure to turn off the regulator.

• For stable circuit operation, keep the mechanism operating for about one minute or more after the regulator is turned on.

• In the test mode, any software protections will not work. Avoid applying any mechanical or electrical shock to the mechanism during adjustment.

• The RFI and RFO signals with a wide frequency range are easy to oscillate. When observing the signals, insert a resistor of 1k ohms in series.

• The load and eject operation is not guarantied with the mechanism upside down. If the mechanism is blocked due to mistaken eject operation, reset the product or turn off and on the ACC to restore it.

2) Test mode
This mode is used to adjust the CD mechanism module.
• To enter the test mode.
While pressing the 4 and 6 keys at the same time, reset.
• To exit from the test mode.
Turn off the ACC and back up.

Notes:
a. During ejection, do not press any other keys than the EJECT key until the loaded disc is ejected.
b. If you have pressed the (->) key or (<-) key during focus search, turn off the power immediately to protect the actuator from damage caused by the lens stuck.
c. For the TR jump modes except 100TR, the track jump operation will continue even if the key is released.
d. For the CRG move and 100TR jump modes, the tracking loop will be closed at the same time when the key is released.
e. When the power is turned off and on, the jump mode is reset to the single TR (91), the RF amp gain is set to 0 dB, and the auto-adjustment values are reset to the default settings.

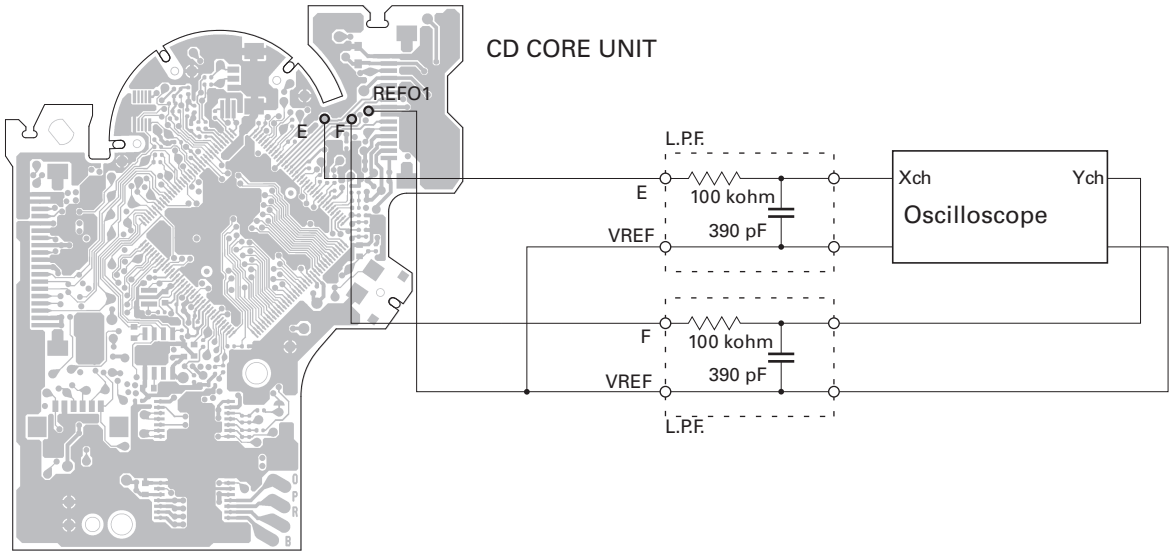
8.2 CHECKING THE GRATING AFTER CHANGING THE PICKUP UNIT

- **Note :**
  The grating angle of the PU unit cannot be adjusted after the PU unit is changed. The PU unit in the CD mechanism module is adjusted on the production line to match the CD mechanism module and is thus the best adjusted PU unit for the CD mechanism module. Changing the PU unit is thus best considered as a last resort. However, if the PU unit must be changed, the grating should be checked using the procedure below.

- **Purpose :**
  To check that the grating is within an acceptable range when the PU unit is changed.

- **Symptoms of Mal-adjustment :**
  If the grating is off by a large amount symptoms such as being unable to close tracking, being unable to perform track search operations, or taking a long time for track searching.

- **Method :**
- Measuring Equipment • Oscilloscope, Two L.P.F.
- Measuring Points • E, F, REFO1
- Disc • TCD-782
- Mode • TEST MODE



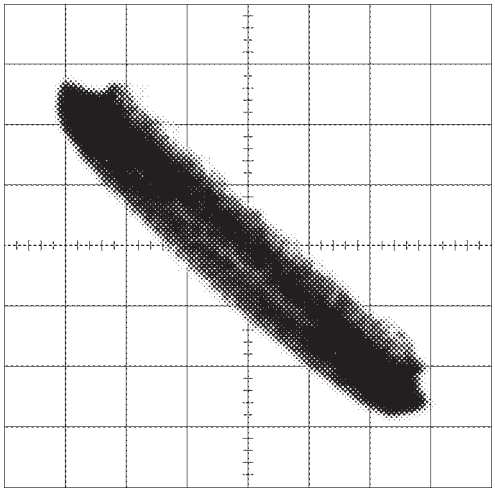
- **Checking Procedure**
1. In test mode, load the disc and switch the 3 V regulator on.
2. Using the -> and <- buttons, move the PU unit to the innermost track.
3. Press key 3 to close focus, the display should read "91". Press key 2 to implement the tracking balance adjustment the display should now read "81". Press key 3. The display will change, returning to "81" on the fourth press.
4. As shown in the diagram above, monitor the LPF outputs using the oscilloscope and check that the phase difference is within 75 degrees. Refer to the photographs supplied to determine the phase angle.
5. If the phase difference is determined to be greater than 75 degrees try changing the PU unit to see if there is any improvement. If, after trying this a number of times, the grating angle does not become less than 75 degrees then the mechanism should be judged to be at fault.

- **Note**
  Because of eccentricity in the disc and a slight misalignment of the clamping center the grating waveform may be seen to "wobble" (the phase difference changes as the disc rotates). The angle specified above indicates the average angle.
- **Hint**
  Reloading the disc changes the clamp position and may decrease the "wobble".

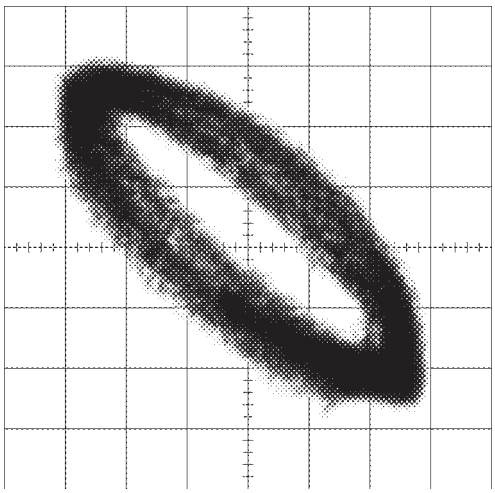
Grating waveform

Ech -> Xch 20 mV/div, AC
Fch -> Ych 20 mV/div, AC

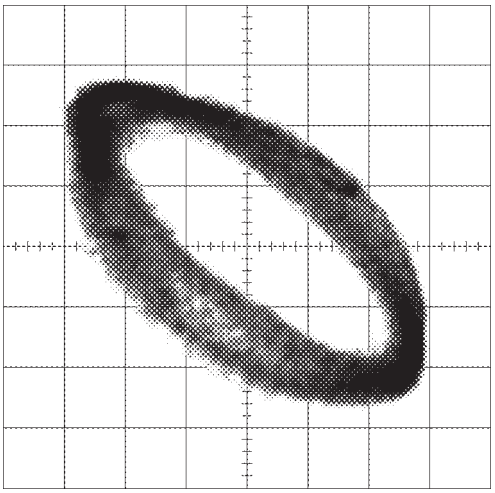
0 degrees



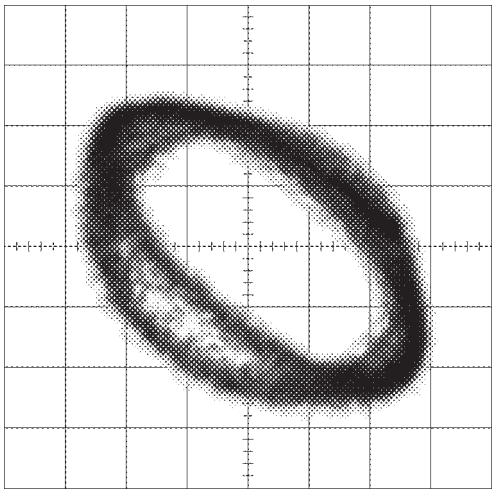
30 degrees



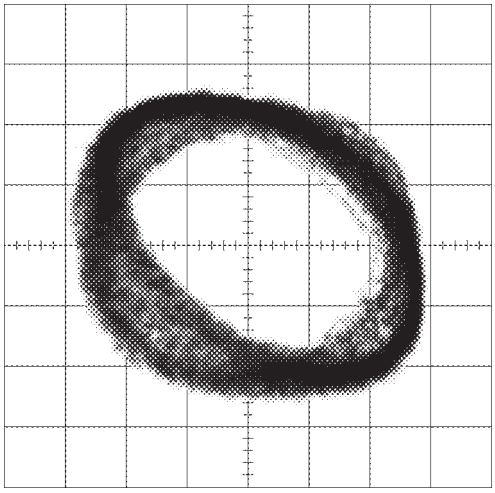
45 degrees



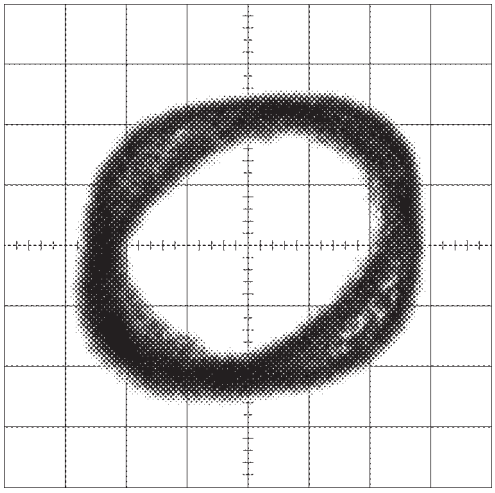
60 degrees



75 degrees



90 degrees



8.3 PCL OUTPUT CONFIRMATION

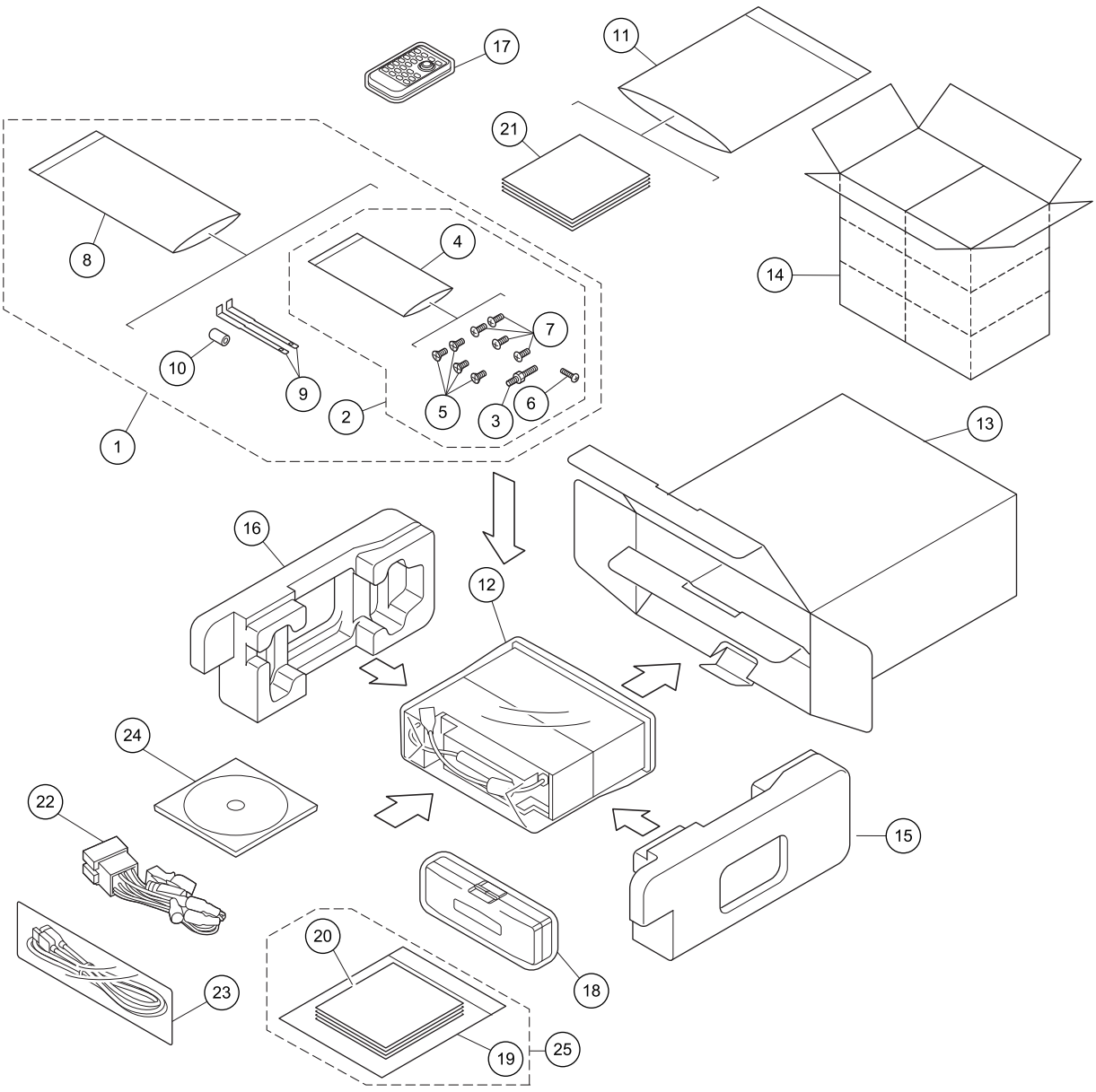
● PCL output

In the normal operation mode (with the detachable panel installed, the ACC switched ON, the standby mode cancelled), shift the STEST IC601(Pin 86) terminal to H.
The clock signal is output from the PCL1 terminal IC601(Pin 37).
The frequency of the clock signal is 468.8 kHz that is one 32th of the fundamental frequency.

9. EXPLODED VIEWS AND PARTS LIST

NOTES : • *Parts marked by " * " are generally unavailable because they are not in our Master Spare Parts List.*
• *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
• *Screw adjacent to▽ mark on the product are used for disassembly.*
• *For the applying amount of lubricants or glue, follow the instructions in this manual. (In the case of no amount instructions,apply as you think it appropriate.)*

9.1 PACKING



(1) PACKING SECTION PARTS LIST

Mark	No.	Description	Part No.
*	1	Accessory Assy	CEA7316
	2	Screw Assy	CEA5322
	3	Screw	CBA1650
*	4	Polyethylene Bag	CEG-127
	5	Screw	CRZ50P090FTC
	6	Screw	JPZ20P060FTB
	7	Screw	TRZ50P080FTC
	8	Polyethylene Bag	CEG1160
	9	Handle	CND3707
	10	Bush	CNV3930

Mark	No.	Description	Part No.
	11	Polyethylene Bag	CEG1116
	12	Polyethylene Bag	CEG1227
	13	Unit Box	CHG6391
	14	Contain Box	CHL6391
	15	Protector	CHP3502
	16	Protector	CHP3503
	17	Remote Control Unit	CXC9113
	18	Case Assy	QXA3049
*	19	Polyethylene Bag	CEG1250
	20	Quick Start Guide	See Language tabel (2)
	21-1	Installation Manual	CRD4253
*	21-2	Caution Card	CRP1335
*	21-3	Caution Card	CRP1363
*	21-4	Caution Card	CRP1366
*	21-5	Warranty Card	CRY1265
*	21-6	Passport	CRY1268
	22	Cord Assy	XDP7003
	23	Cord Assy	CDP1040
	24	CD-ROM (Operation Manual)	CPJ1214
	25	Owner's Manual Assy	CXC9690

(2) Language of Quick Start Guide

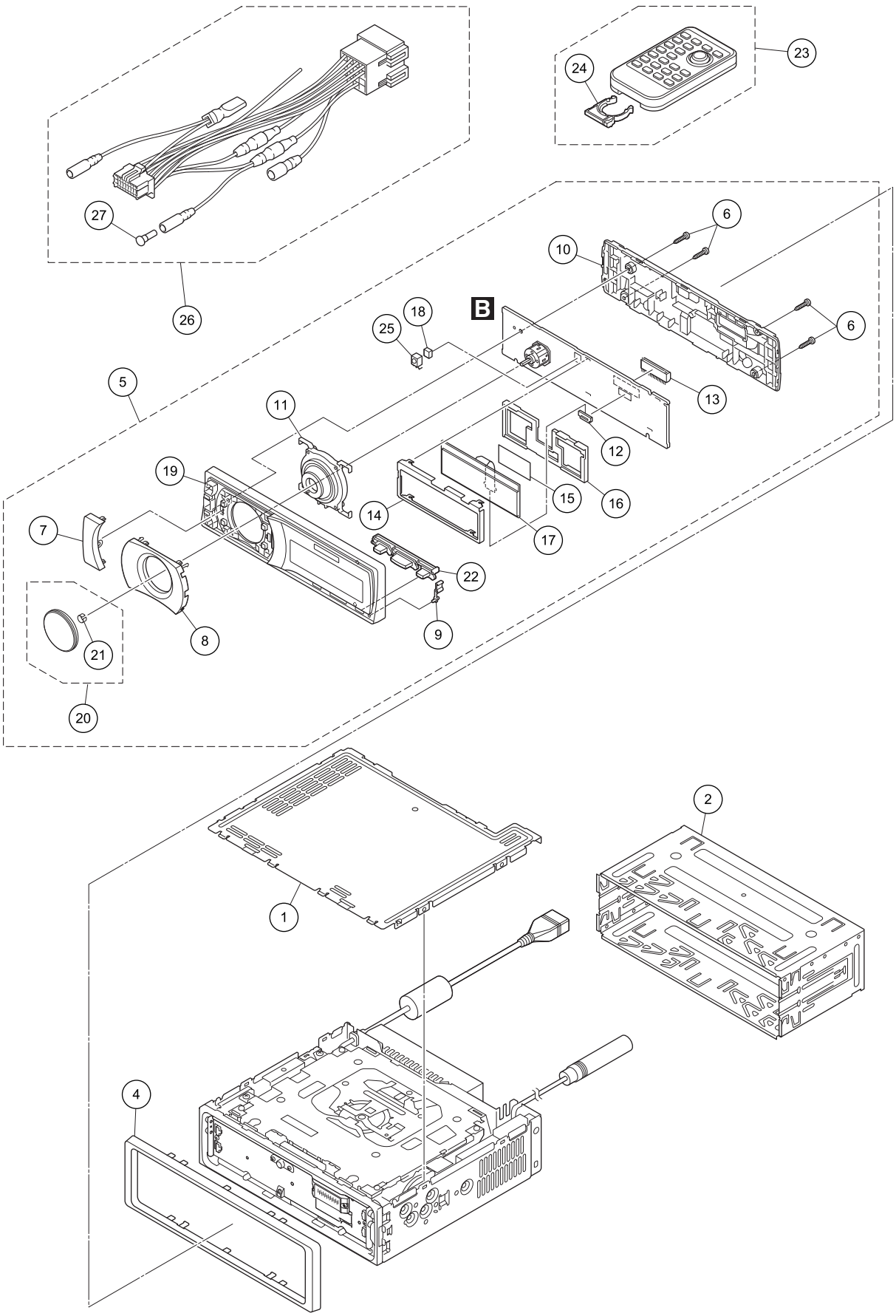
Mark	Part No.	Language
*	CRB2601	English
*	CRB2602	Spanish
*	CRB2603	German
*	CRB2604	French
*	CRB2605	Italian
*	CRB2606	Dutch
*	CRB2607	Russian

(3) CONTENTS OF CD-ROM (Operation Manual), CPJ1214

Mark	Part No.	Language
*	CRB2562	English
*	CRB2563	Spanish
*	CRB2564	German
*	CRB2565	French
*	CRB2566	Italian
*	CRB2567	Dutch
*	CRB2568	Russian

All operation manuals are supplied in PDF files by the CD-ROM. No printed papers are available.

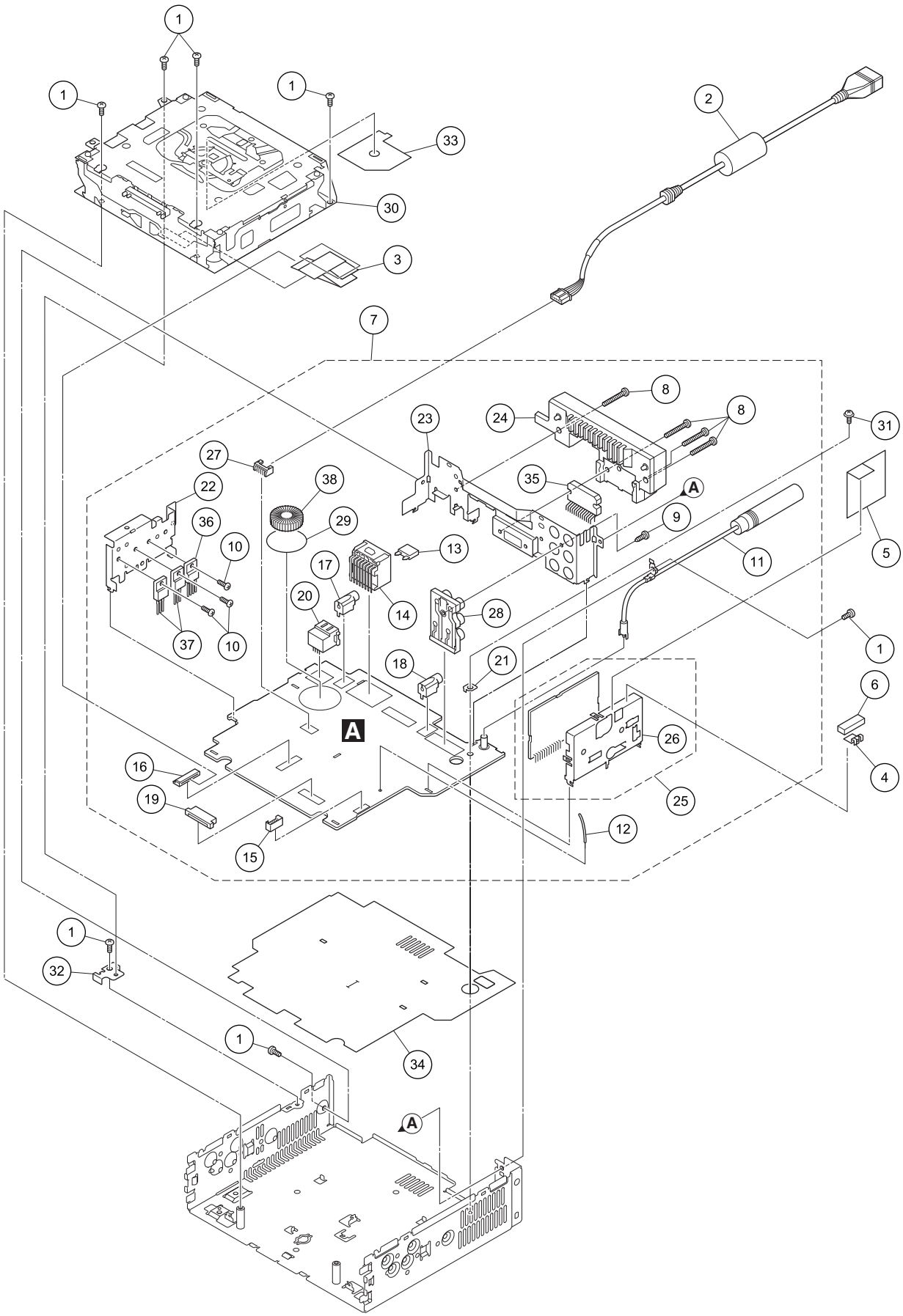
9.2 EXTERIOR(1)



EXTERIOR(1) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Case	CNB3466
	2	Holder	CND3598
	3	.....	
	4	Panel	CNS9319
	5	Detach Grille Assy	CXC8928
	6	Screw	BPZ20P080FTB
	7	Button(SRC, BAND)	CAI1661
	8	Button(DISP, S.Rtrv, RDM, MUTE)	CAI1665
	9	Button(Reset)	CAI1676
	10	Cover	CNS9294
	11	Lighting Conductor	CNV9883
	12	Connector(CN1961)	CKS5545
	13	Connector(CN1801)	CKS5662
	14	Holder	CND4267
	15	Double Side Tape	CNM8673
	16	Holder	CNV9886
	17	OEL Unit	MXS8260
	18	Spacer	CNN2403
	19	Grille Unit	CXC8872
	20	Knob Unit	CXC8883
	21	Spring	XBL7005
	22	Button Unit(TA, LIST, OPEN)	CXC8935
	23	Remote Control Unit	CXC9113
	24	Cover	CZN5357
	25	IC(IC1931)	GP1UX31RK
	26	Cord Assy	XDP7003
	27	Cap	CKX-003

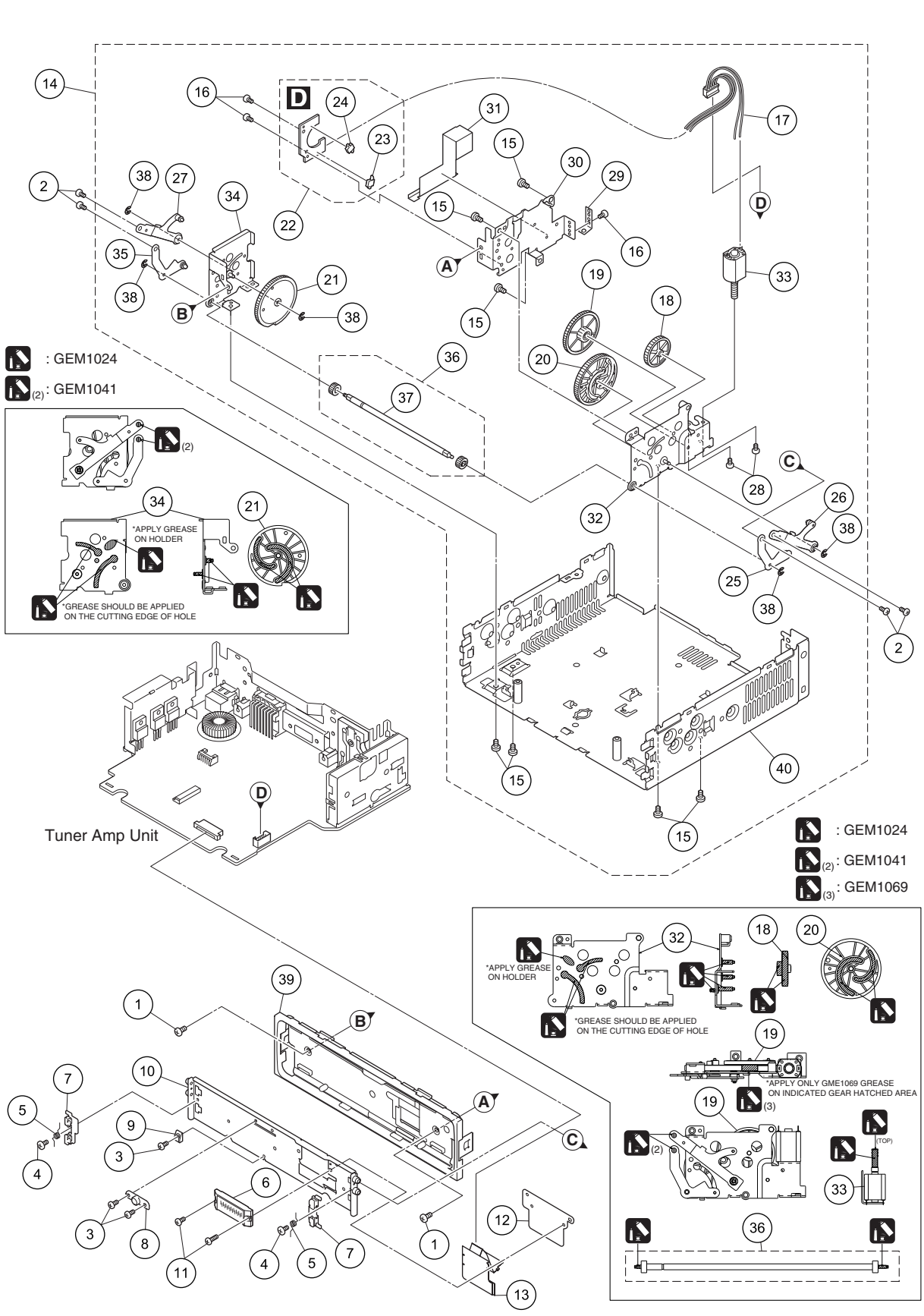
9.3 EXTERIOR(2)



EXTERIOR(2) SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw	BSZ26P060FTC
	2	Cord Assy	CDE8351
	3	Cable	CDE8549
	4	Earth Plate	CND2171
	5	Insulator	CNM8790
	6	Cushion	CNM9126
	7	Tuner Amp Unit	CWN3147
	8	Screw	BMZ26P180FTC
	9	Screw	BPZ26P070FTC
	10	Screw	BSZ26P060FTC
	11	Antenna Cable(CN402)	CDH1336
	12	Clamper	CEF1048
⚠	13	Fuse(10 A)	YEK5001
	14	Plug(CN981)	CKM1376
	15	Plug(CN871)	CKS-786
	16	Connector(CN701)	CKS3833
	17	Connector(CN151)	CKS4124
	18	Connector(CN181)	CKS4124
	19	Connector(CN801)	CKS4811
	20	Connector(CN101)	CKS5271
	21	Holder(CN401)	CNC5399
	22	Holder	CND3133
	23	Holder	CND4255
	24	Heat Sink	CNR1940
	25	FM/AM Tuner Unit(Y401)	CWE2097
	26	Holder	CND4324
	27	Plug(CN781)	KM200NA5L
	28	Pin Jack(CN302)	XKB7001
	29	Insulator	XNM7031
	30	CD Mechanism Module(S10.5)	CXK5770
	31	Screw	ISS26P055FTC
	32	Holder	XNC7014
	33	Insulator	XNM7106
	34	Insulator	XNM7114
	35	IC(IC351)	PAL007C
	36	IC(IC911)	NJM2388F84
	37	Transistor(Q751,Q901)	2SD2396
	38	Choke Coil(L981)	CTH1280

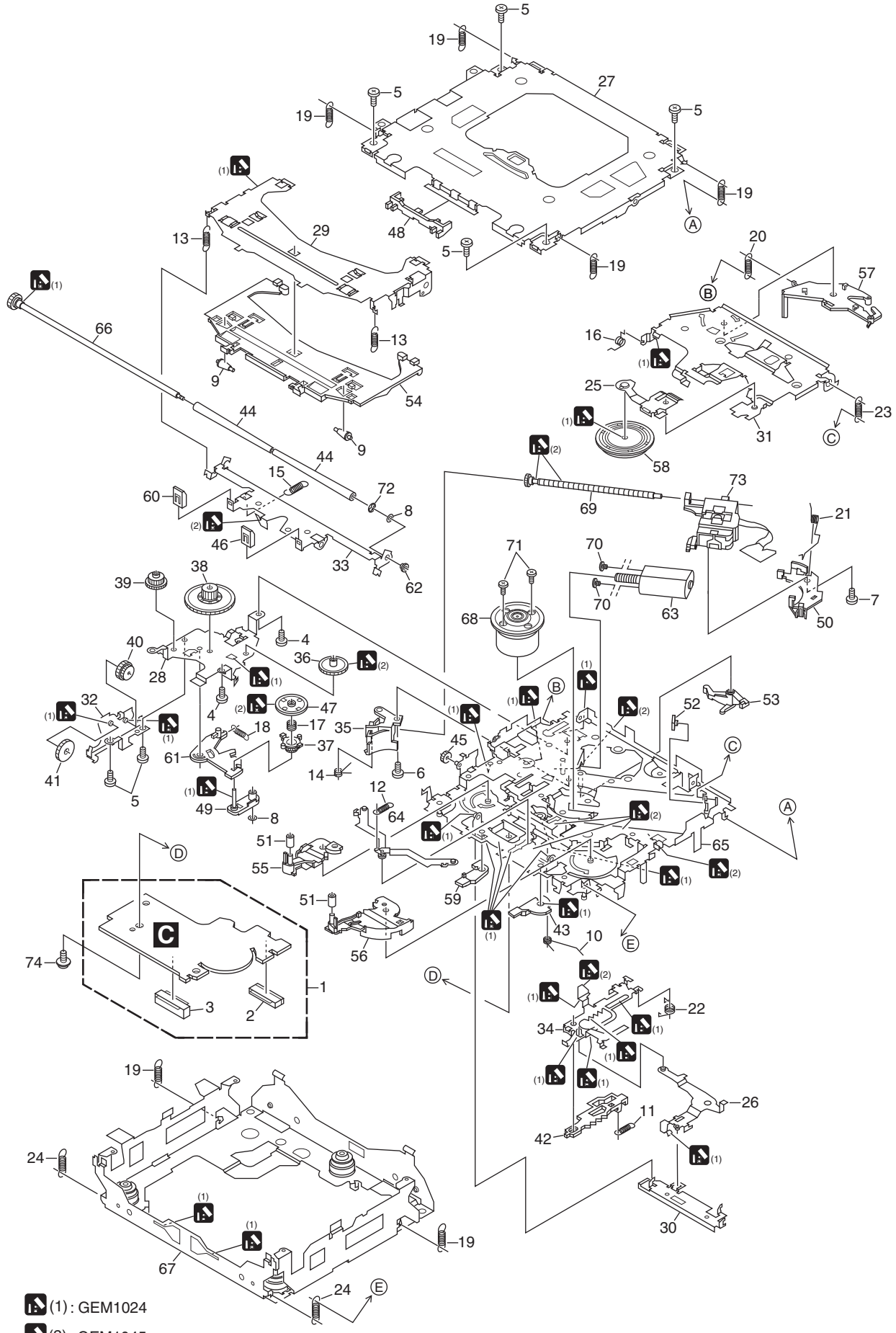
9.4 DRIVE UNIT



DRIVE UNIT SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	Screw(M2.6 x 4)	CBA1828
	2	Screw(M2 x 2.5)	CBA1924
	3	Screw(M2 x 2)	CBA1871
	4	Screw(M2 x 1.9)	CBA1935
	5	Spring	CBH2530
	6	Connector	CKS5273
	7	Arm	CNV6962
	8	Guide	CNV6967
	9	Guide	CNV8048
	10	Case Unit	CXC6483
	11	Screw(M2 x 3.5)	XBA7002
	12	Holder	XNC7019
	13	Flexible PCB	XNP7026
	14	Drive Unit	CXC8854
	15	Screw	BMZ26P040FTC
	16	Screw(M2 x 2)	CBA1871
	17	Cord	CDE7392
	18	Gear	CNV7752
	19	Gear	CNV7753
	20	Gear	CNV7754
	21	Gear	CNV7755
	22	Switch Unit	CWS1389
	23	Switch	CSN1051
	24	Spring Switch	CSN1052
	25	Arm Unit	CXC2199
	26	Arm Unit	CXC6623
	27	Arm Unit	CXC6624
	28	Screw	JFZ20P020FTC
	29	Spring	XBL7003
	30	Holder	XNC7017
	31	Insulator	XNM7119
	32	Holder Unit	XXA7399
	33	Motor Unit	XXA7400
	34	Holder Unit	XXA7401
	35	Arm Unit	XXA7403
	36	Gear Unit	XXA7424
	37	Shaft	XLA7001
	38	Washer	YE15FTC
	39	Panel Unit	CXC8925
*	40	Chassis Unit	CXC8855

9.5 CD MECHANISM MODULE



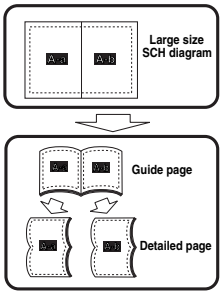
CD MECHANISM MODULE SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	CD Core Unit(S10.5COMP2-iPod)	CWX3526
	2	Connector(CN101)	CKS4182
	3	Connector(CN701)	CKS4186
	4	Screw	BMZ20P025FTC
	5	Screw	BSZ20P040FTC
	6	Screw(M2 x 3)	CBA1511
	7	Screw(M2 x 4)	CBA1835
	8	Washer	CBF1038
	9	Roller	CNV9499
	10	Spring	CBH2609
	11	Spring	CBH2612
	12	Spring	CBH2614
	13	Spring	CBH2616
	14	Spring	CBH2617
	15	Spring	CBH2620
	16	Spring	CBH2855
	17	Spring	CBH2937
	18	Spring	CBH2735
	19	Spring	CBH2854
	20	Spring	CBH2642
	21	Spring	CBH2856
	22	Spring	CBH2857
	23	Spring	CBH2860
	24	Spring	CBH2861
	25	Spring	CBL1686
	26	Arm	CND1909
	27	Frame	CND2582
	28	Bracket	CND2583
	29	Arm	CND3831
	30	Lever	CND2585
	31	Arm	CND2586
	32	Bracket	CND2587
	33	Arm	CND2588
	34	Lever	CND2589
	35	Holder	CNV7201
	36	Gear	CNV7207
	37	Gear	CNV7208
	38	Gear	CNV7209
	39	Gear	CNV7210
	40	Gear	CNV7211
	41	Gear	CNV7212
	42	Rack	CNV7214
	43	Arm	CNV7216
	44	Roller	CNV7218
	45	Gear	CNV7219
	46	Guide	CNV7361
	47	Gear	CNV7595
	48	Guide	CNV7799
	49	Arm	CNV7805
	50	Rack	CNV8342
	51	Roller	CNV8343
	52	Holder	CNV8344
	53	Arm	CNV8345
	54	Guide	CNV9498
	55	Arm	CNV8348
	56	Arm	CNV8349
	57	Arm	CNV8350
	58	Clamper	CNV8365
	59	Arm	CNV8386
	60	Guide	CNV8396
	61	Arm	CNV8413
	62	Collar	CNV8938
	63	Motor Unit(M2)	CXC4026
	64	Arm Unit	CXC4027
	65	Chassis Unit	CXC4028
	66	Gear Unit	CXC4029
	67	Frame Unit	CXC4031
	68	Motor Unit(M1)	CXC7134
	69	Screw Unit	CXC6359
	70	Screw	JFZ20P020FTC
	71	Screw	JGZ17P022FTC
	72	Washer	YE20FTC
	73	Pickup Unit(P10.5)(Service)	CXX1942
	74	Screw	IMS26P030FTC

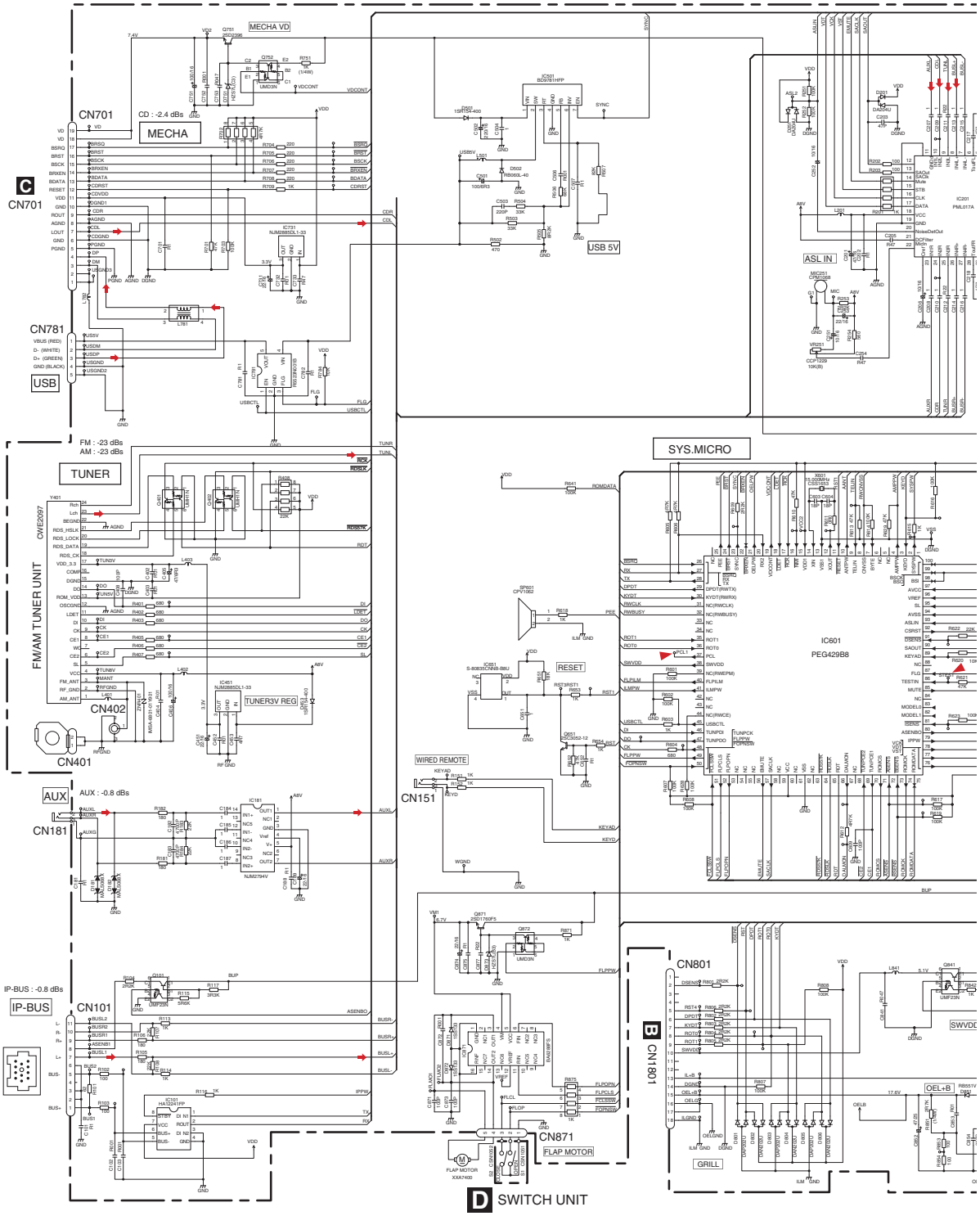
10. SCHEMATIC DIAGRAM

10.1 OVERALL CONNECTION DIAGRAM(GUIDE PAGE)

Note: When ordering service parts, be sure to refer to " EXPLODED VIEWS AND PARTS LIST" or "ELECTRICAL PARTS LIST".



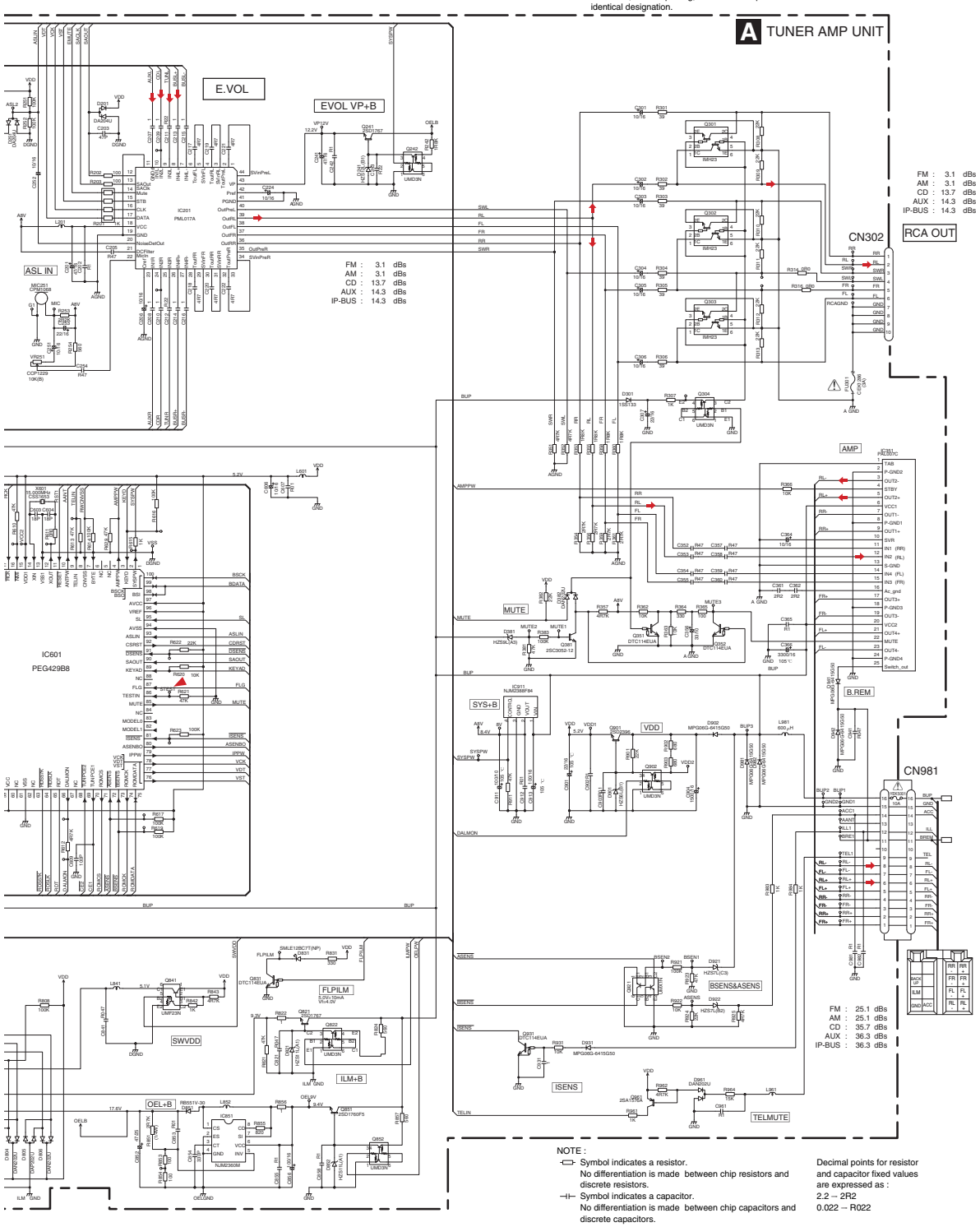
A-a



A D

A-b

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.



NOTE :

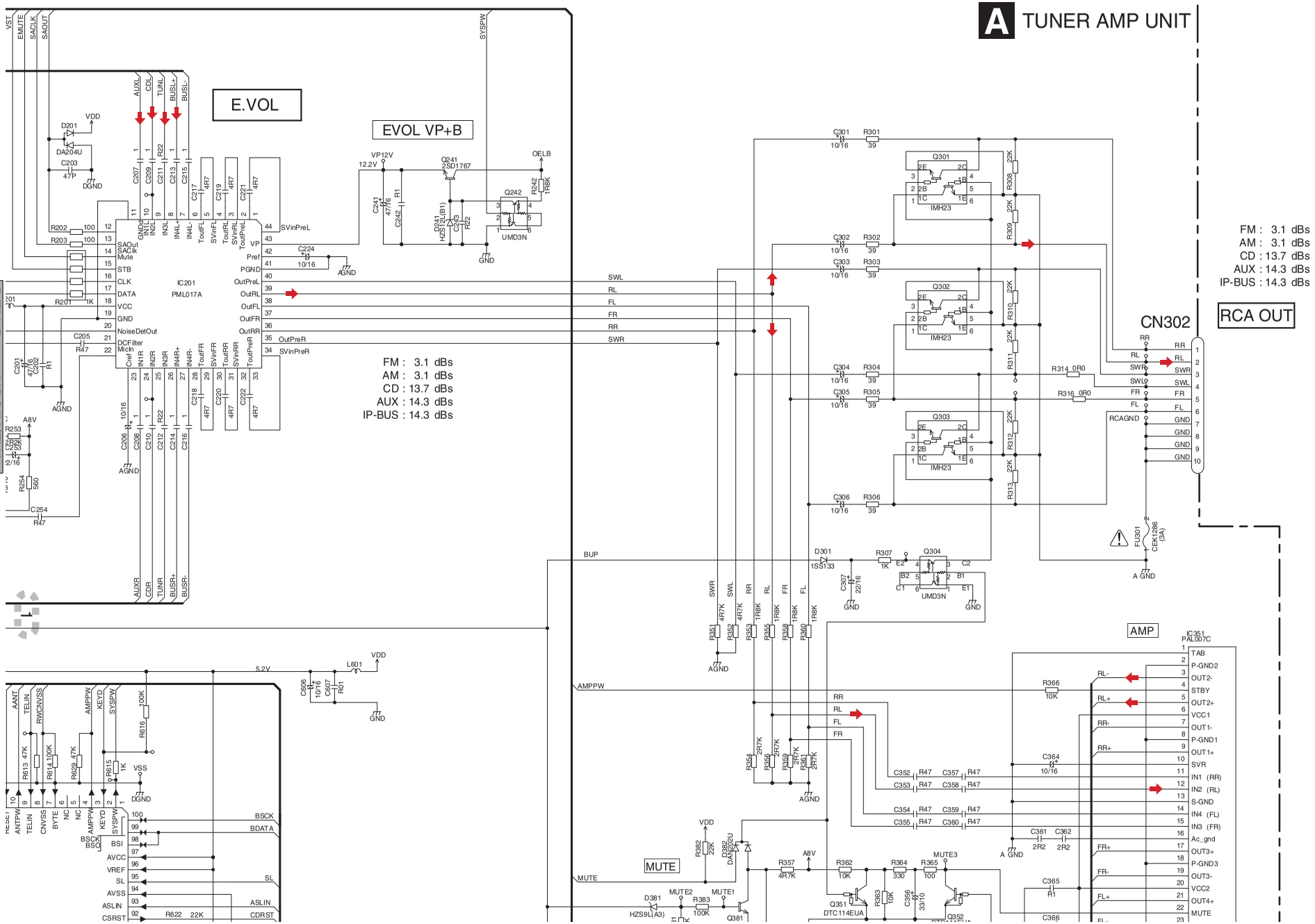
- ⊏⊐ Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- ⊣⊢ Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

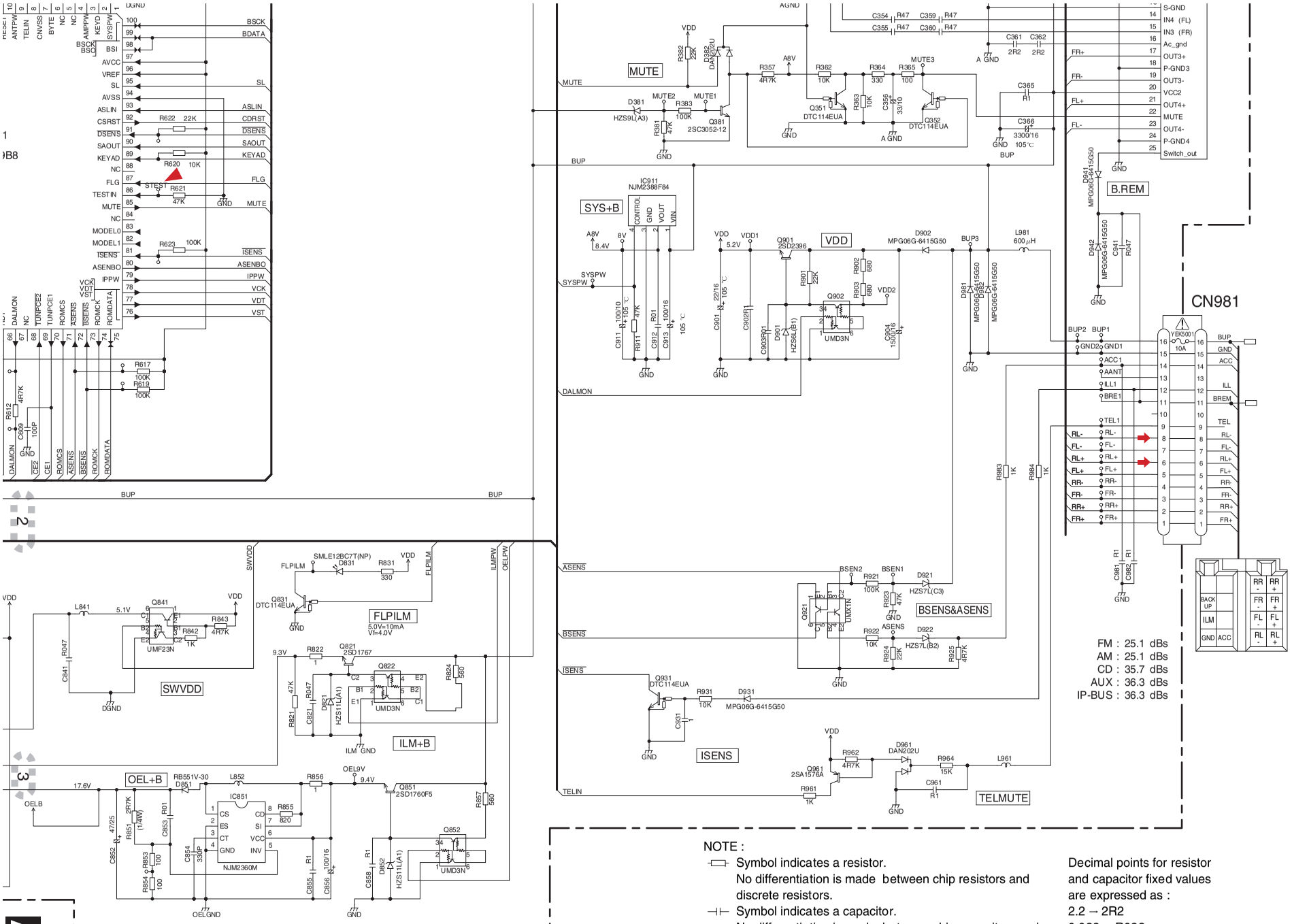
Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022

The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.

A TUNER AMP UNIT

DEH-P7000UB/XN/EW5





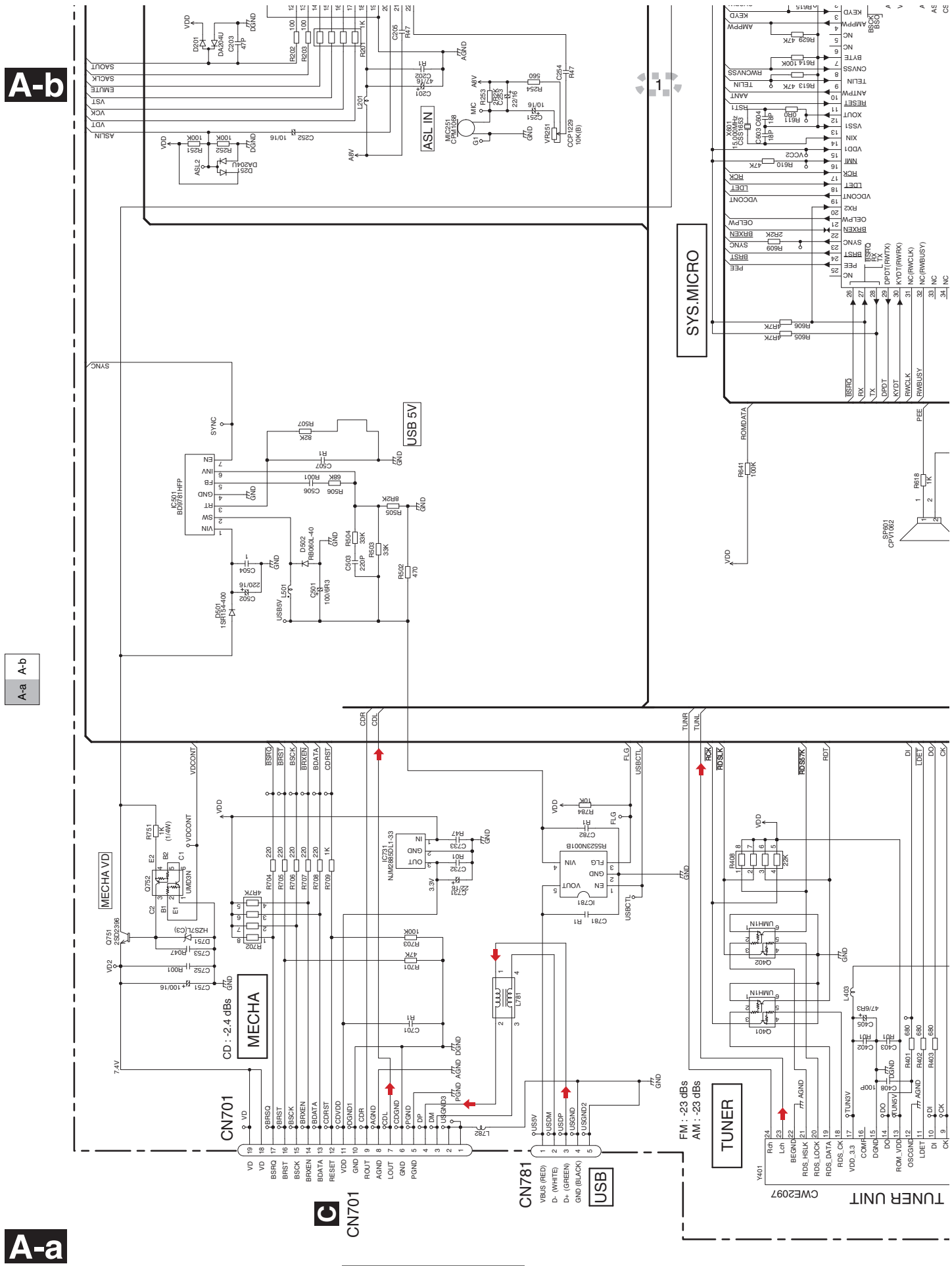
NOTE :

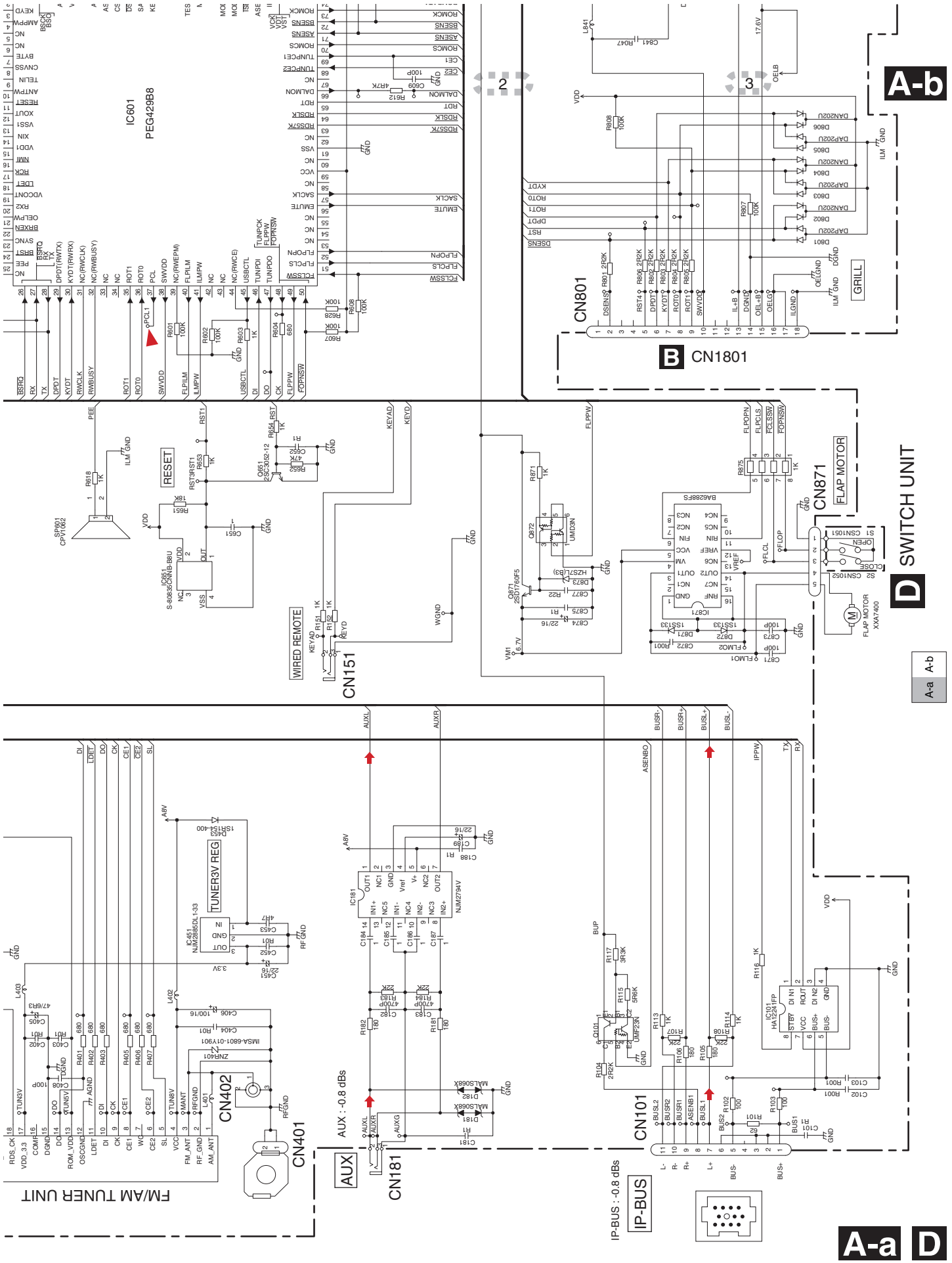
- Symbol indicates a resistor. No differentiation is made between chip resistors and discrete resistors.
- Symbol indicates a capacitor. No differentiation is made between chip capacitors and discrete capacitors.

Decimal points for resistor and capacitor fixed values are expressed as :
2.2 → 2R2
0.022 → R022

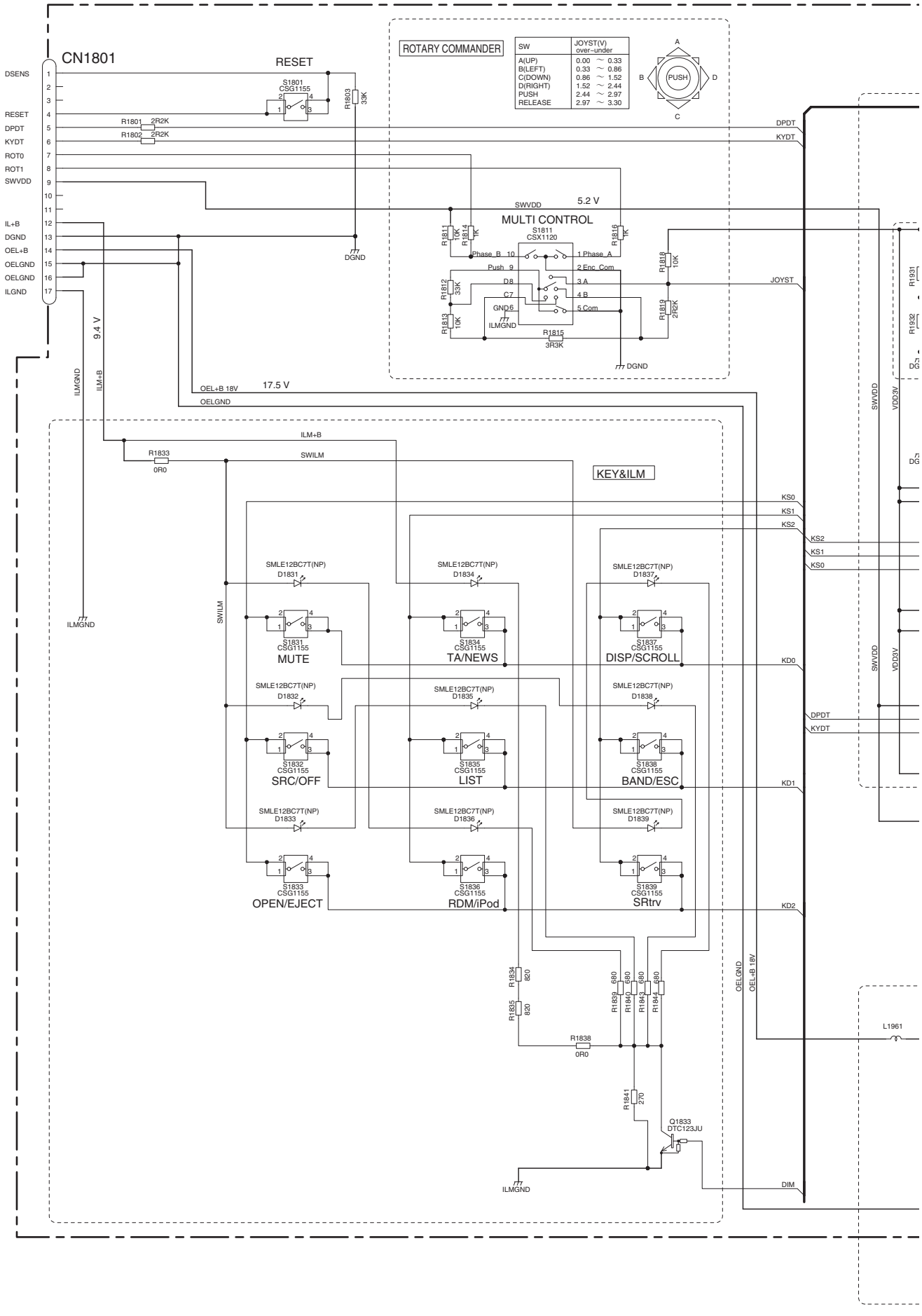
A-a A-b

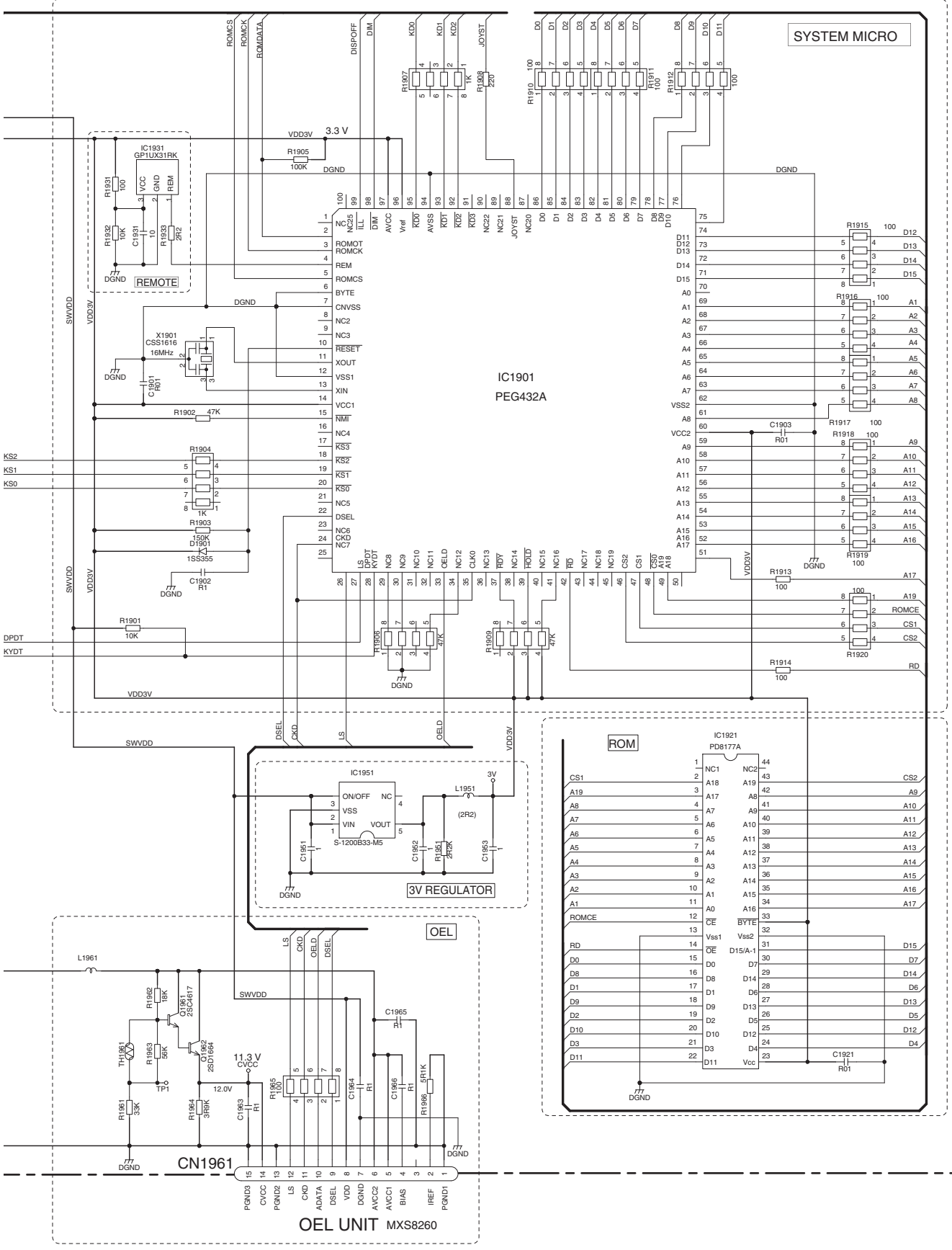
A-b


A-b
A-a
SYS.MICRO
ASL IN
USB 5V
MECHA
CD : -2.4 dBs
CN701
CN781
USB
TUNER
FM : -23 dBs
AM : -23 dBs
TUNER UNIT
CWE2097
C


A-b
B CN1801
CN801
GRILL
IC601
PEG429B8
2
3
D SWITCH UNIT
CN871
FLAP MOTOR
RESET
WIRED REMOTE
CN151
A-b
A-a
FM/AM TUNER UNIT
CN402
CN401
AUX : -0.8 dBs
AUX
CN181
CN101
IP-BUS : -0.8 dBs
IP-BUS
A-a D

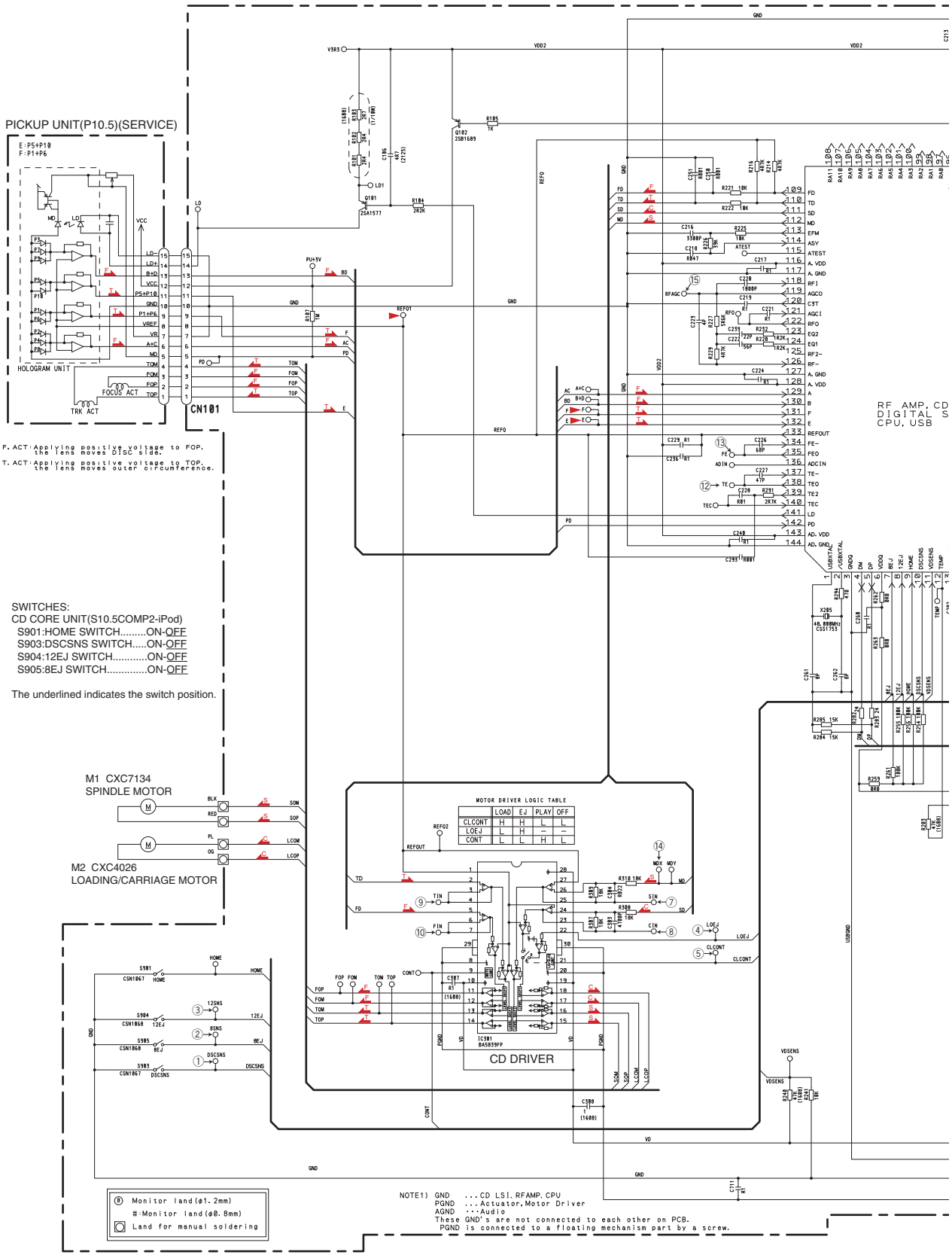
10.2 KEYBOARD UNIT




SYSTEM MICRO
IC1901
PEG432A
REMOTE
IC1931
GP1UX31RK
X1901
CSS1616
16MHz
3V REGULATOR
IC1951
S-1200B33-M5
ROM
IC1921
PD8177A
OEL
CN1961
OEL UNIT MXS8260
VDD3V
3.3 V
DGND
SWVDD
DPDT
KYDT
KS2
KS1
KS0
ROMCS
ROMCK
ROMDATA
DISPOFF
DIM
JOYST
LS
CKD
OELD
DSEL
RD
ROMCE
CS1
CS2
11.3 V
CVCC
12.0V

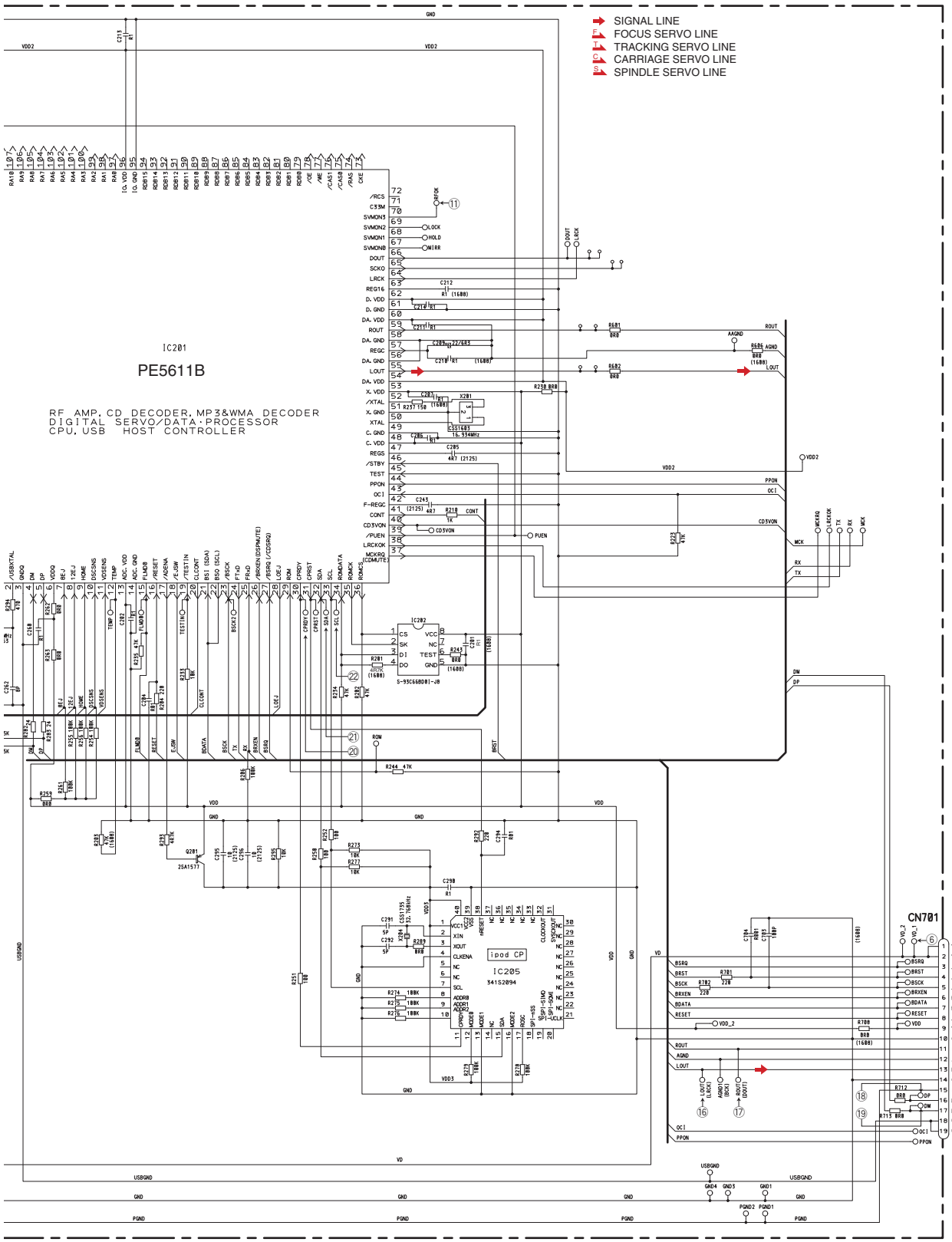
10.3 CD MECHANISM MODULE(GUIDE PAGE)

C-a



C-b

C CD CORE UNIT(S10.5COMP2-iPod)



C CD CORE UNIT(S10.5COMP2-iPod)

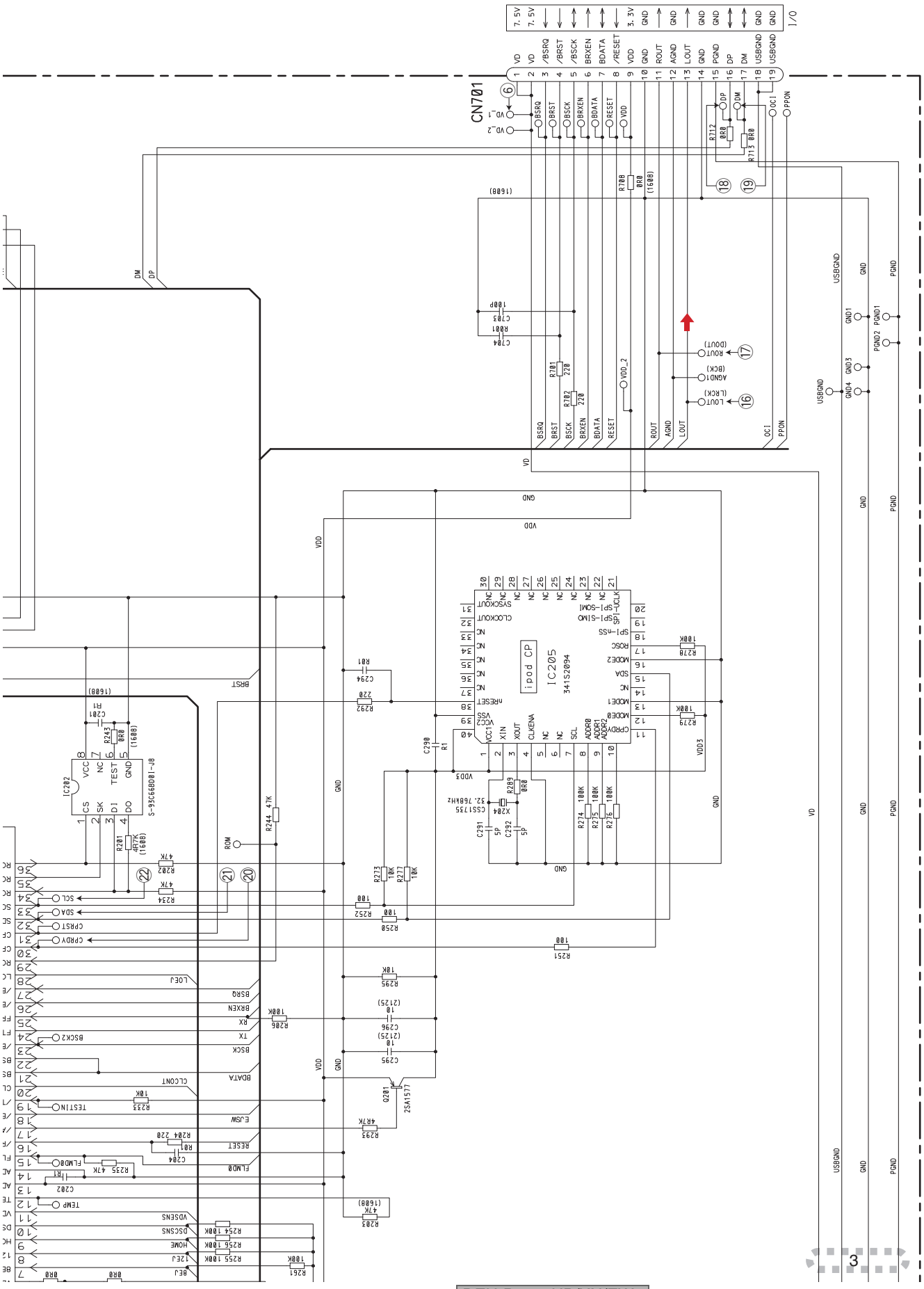
SIGNAL LINE
FOCUS SERVO LINE
TRACKING SERVO LINE
CARRIAGE SERVO LINE
SPINDLE SERVO LINE

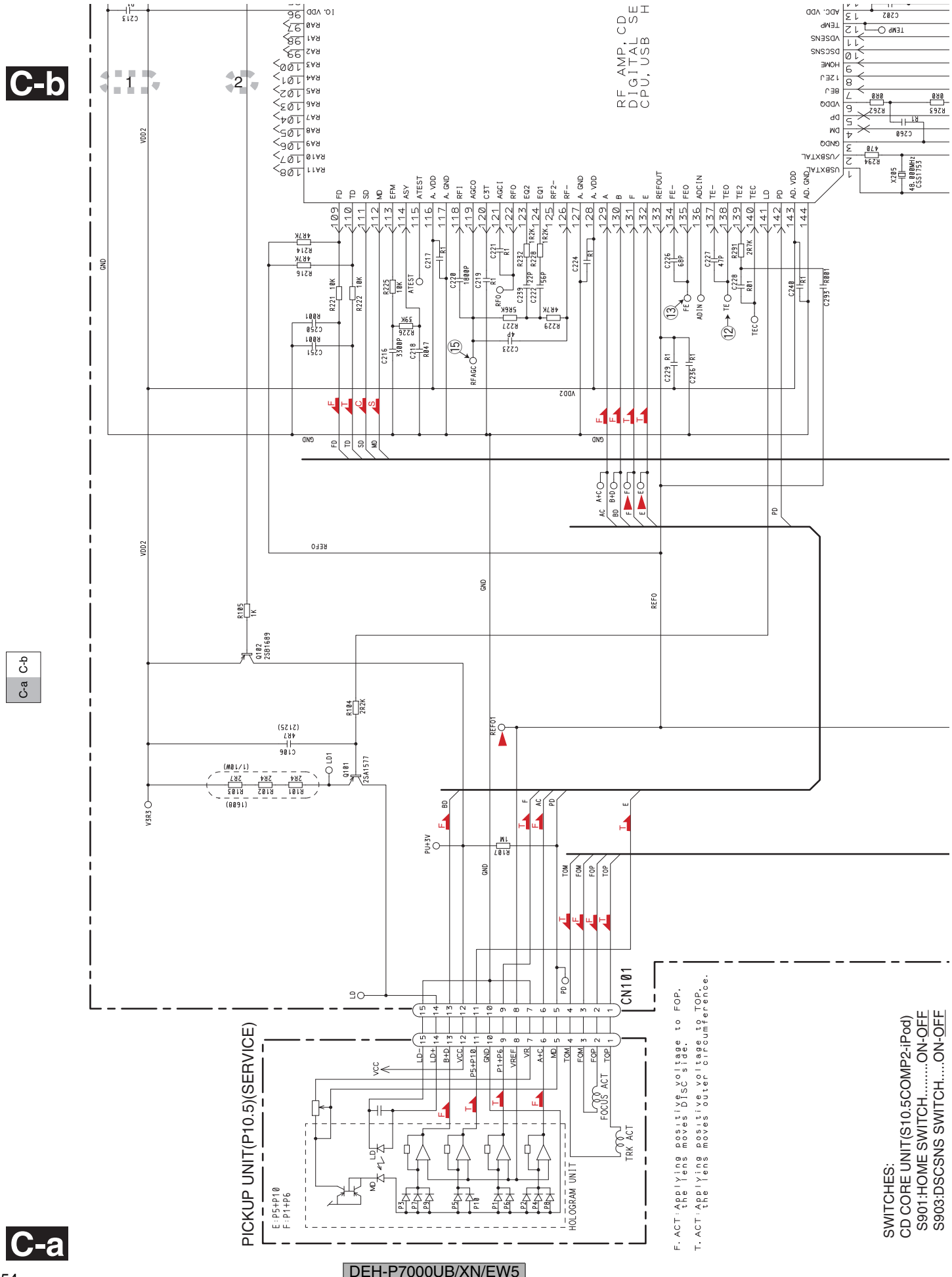
IC201

PE5611B

RF AMP, CD DECODER, MP3&WMA DECODER
DIGITAL SERVO/DATA·PROCESSOR
CPU, USB HOST CONTROLLER

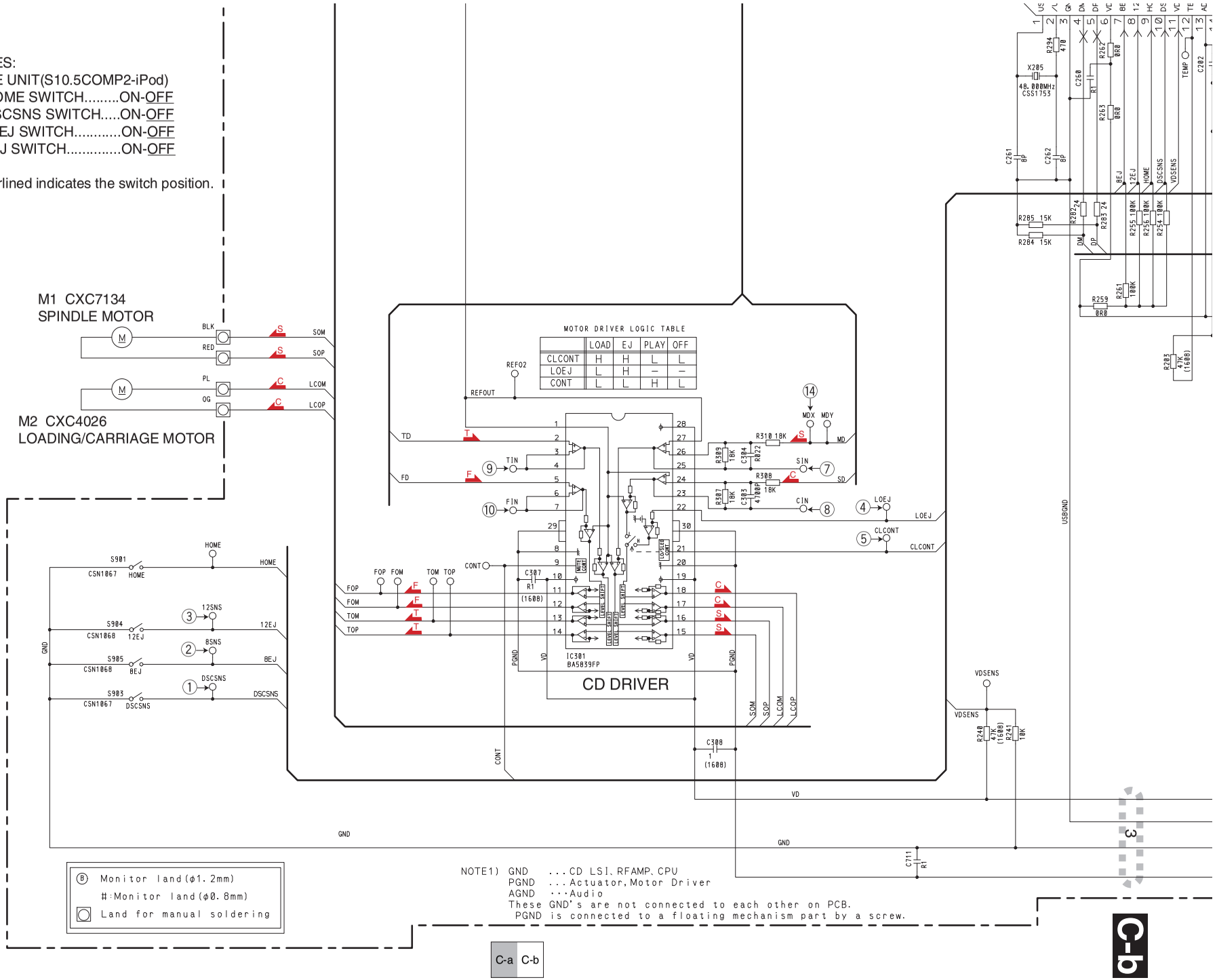
A CN701


CN701
7.5V
7.5V
3.3V
I/O
VD
/BSRQ
/BRST
/BSCK
BRXEN
BDATA
/RESET
VDD
GND
ROUT
AGND
LOUT
PGND
DP
DM
USBGND
OC1
PPON
IC205
ipod CP
341S2094
S-93C66B01-J8
32.768kHz
CSS1735
DEH-P7000UB/XN/EW5


C-b
C-a
RF AMP, CD
DIGITAL SE
CPU, USB H
PICKUP UNIT(P10.5)(SERVICE)
E:P5+P10
F:P1+P6
HOLOGRAM UNIT
CN101
F. ACT : Applying positive voltage to FOP.
the lens moves DISC side.
T. ACT : Applying positive voltage to TOP.
the lens moves outer circumference.
SWITCHES:
CD CORE UNIT(S10.5COMP2-iPod)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH....ON-OFF

SWITCHES:
CD CORE UNIT(S10.5COMP2-iPod)
S901:HOME SWITCH.....ON-OFF
S903:DSCSNS SWITCH.....ON-OFF
S904:12EJ SWITCH.....ON-OFF
S905:8EJ SWITCH.....ON-OFF

The underlined indicates the switch position.

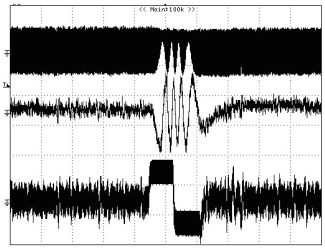
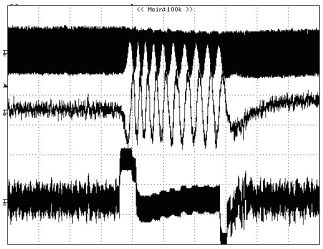
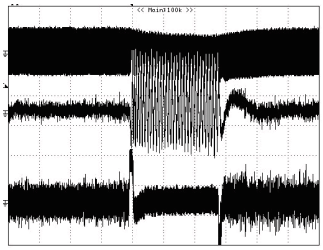
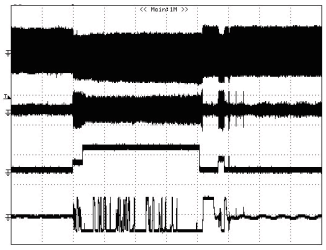
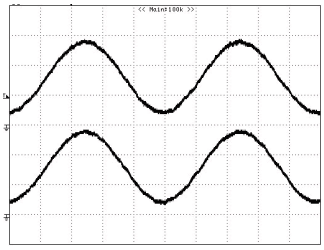
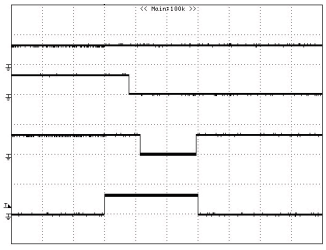
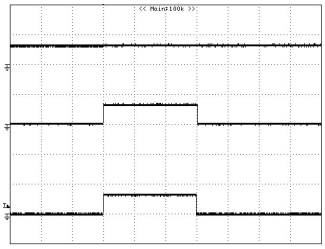
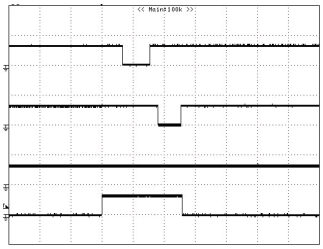
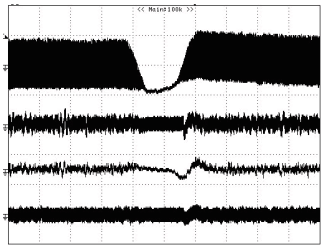
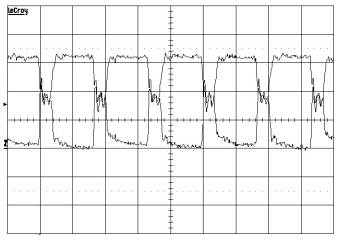
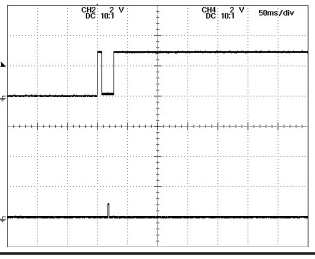
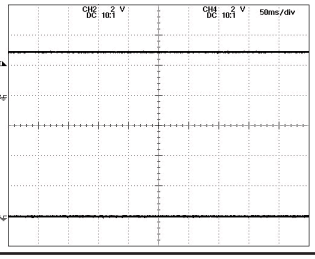


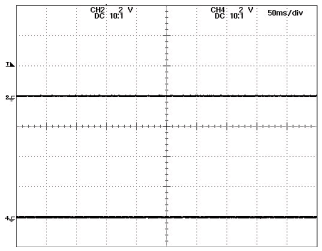
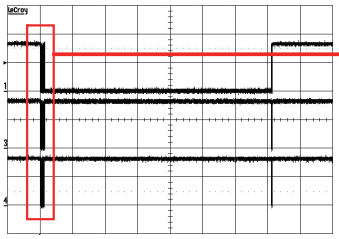
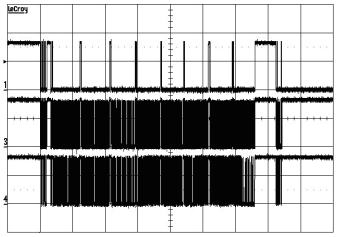
10.4 WAVEFORMS

● CD CORE UNIT

Note : 1. The encircled numbers denote measuring points in the circuit diagram.
2. Reference voltage REFO1(1.65 V)

①DSCSNS 5 V/div 500 ms/div ②8SNS 5 V/div ③12SNS 5 V/div ④LOEJ 5 V/div 12 cm CD Loading operation Ref.: GND Mode: Normal	①DSCSNS 5 V/div 500 ms/div ⑤CLCONT 5 V/div ④LOEJ 5 V/div ⑥VD 10 V/div 12 cm CD Loading operation Ref.: GND Mode: Normal	①DSCSNS 5 V/div 500 ms/div ②8SNS 5 V/div ③12SNS 5 V/div ④LOEJ 5 V/div 8 cm CD Loading operation Ref.: GND Mode: Normal
⑦SIN 1 V/div 1 s/div ⑧CIN 500 mV/div ⑨TIN 1 V/div 12 cm CD-DA setup operation after loading Ref.: REFO Mode: Normal	⑩FIN 200 mV/div 500 ms/div ⑪RFOK(MONI_3) 2 V/div ⑦SIN 2 V/div 12 cm CD-DA Source On setup operation Ref.: REFO Mode: Normal	⑫TE 500 mV/div 200 ms/div ⑬FE 500 mV/div Source On setup operation Ref.: REFO Mode: Normal
⑬FE 500 mV/div 20 ms/div ⑩FIN 500 mV/div ⑫TE 500 mV/div ⑨TIN 500 mV/div CD-DA Play operation Ref.: REFO Mode: Normal	⑭MDX 2 V/div 200 ms/div ⑦SIN 500 mV/div Spindle waveform during play operation Ref.: REFO Mode: Normal	⑭MDX 2 V/div 5 µs/div ⑦SIN 500 mV/div Spindle waveform during play operation (Wider) Ref.: REFO Mode: Normal
⑩FIN 500 mV/div 200 ms/div ⑬FE 500 mV/div Focus Search waveform Ref.: REFO Mode: TEST	⑫TE 500 mV/div 2 ms/div ⑮RFAGC 500 mV/div Track Open waveform Ref.: REFO Mode: TEST	⑮RFAGC 1 V/div 500 µs/div ⑫TE 500 mV/div ⑨TIN 500 mV/div 1 Track Jump waveform Ref.: REFO Mode: TEST

⑮RFAGC 1 V/div 500 µs/div ⑫TE 500 mV/div ⑨TIN 500 mV/div 4 Tracks Jump waveform  	⑮RFAGC 1 V/div 500 µs/div ⑫TE 500 mV/div ⑨TIN 500 mV/div 10 Tracks Jump waveform  	⑮RFAGC 1 V/div 2 ms/div ⑫TE 500 mV/div ⑨TIN 500 mV/div 32 Tracks Jump waveform 
⑮RFAGC 1 V/div 200 ms/div ⑫TE 1 V/div ⑧CIN 1 V/div ⑦SIN 2 V/div Search operation(Outter to Inner)  	⑯LOUT 1 V/div 200 µs/div ⑰ROUT 1 V/div Analog audio waveform  	①DSCSNS 5 V/div 500 ms/div ②8SNS 5 V/div ③12SNS 5 V/div ④LOEJ 5 V/div 12 cm CD Eject operation 
①DSCSNS 5 V/div 500 ms/div ⑤CLCONT 5 V/div ④LOEJ 5 V/div 12 cm CD Eject operation  	①DSCSNS 5 V/div 500 ms/div ②8SNS 5 V/div ③12SNS 5 V/div ④LOEJ 5 V/div 8 cm CD Eject operation  	⑮RFAGC 1 V/div 500 µs/div ⑨TIN 1 V/div ⑫TE 1 V/div ⑩FIN 1 V/div Black dot(800 µm) during play 
⑱DP 1 V/div 50 ns/div ⑲DM 1 V/div USB Play 	⑱DP 2 V/div 50 ms/div ⑲DM 2 V/div USB device inserting to USB connector. 	⑱DP 2 V/div 50 ms/div ⑲DM 2 V/div CD Play with USB(iPod) device connecting. 

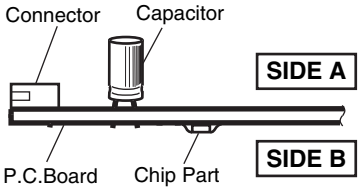
⑱DP 2 V/div 50 ms/div ⑲DM 2 V/div ACC OFF with USB(iPod) device connecting. 	⑳CPRDY 2 V/div 10 s/div ㉑SDA 2 V/div ㉒SCL 2 V/div iPod Authentication Operation 	⑳CPRDY 2 V/div ㉑SDA 2 V/div ㉒SCL 2 V/div iPod Authentication Operation(zoom until 2 s) 

11. PCB CONNECTION DIAGRAM

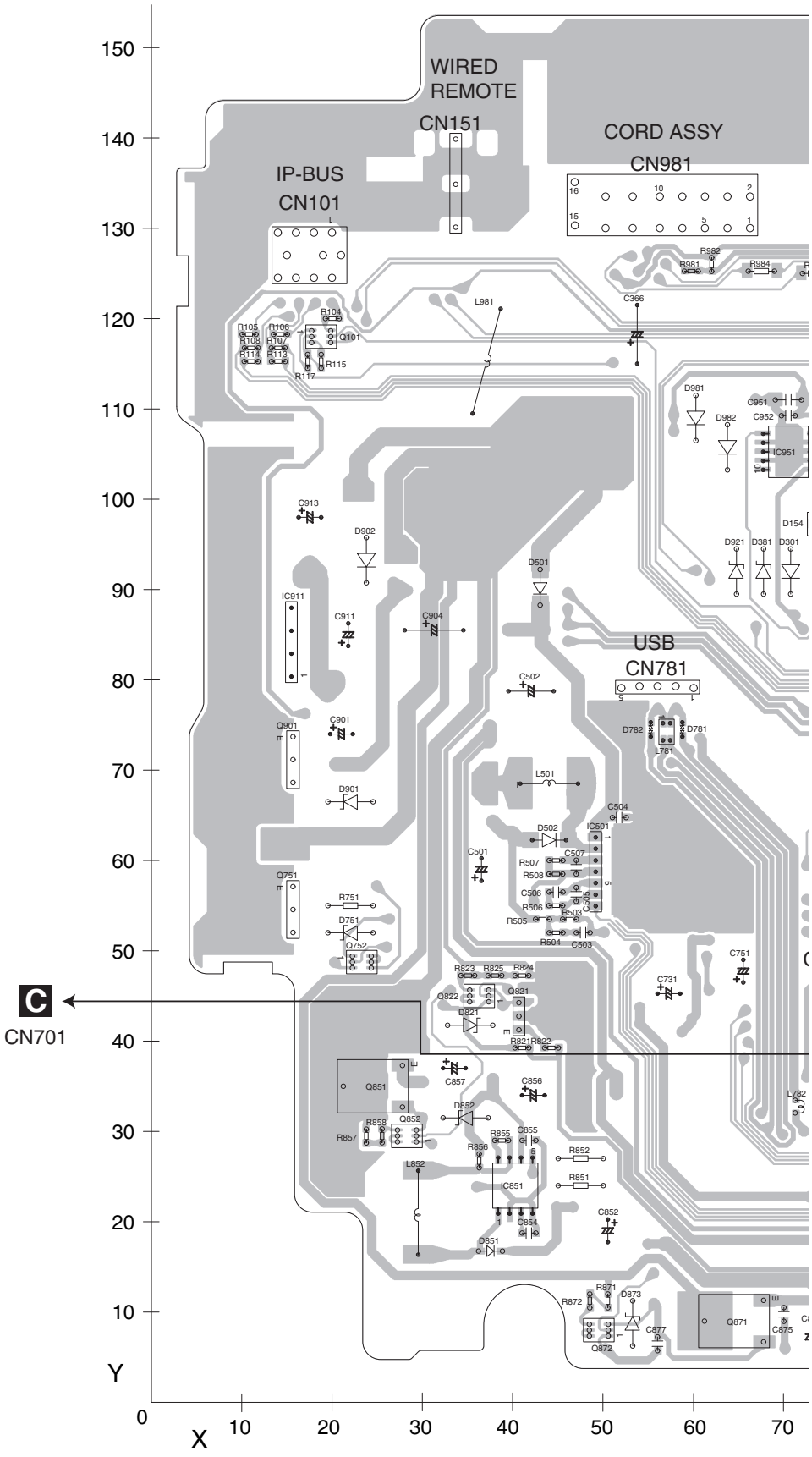
11.1 TUNER AMP UNIT

NOTE FOR PCB DIAGRAMS

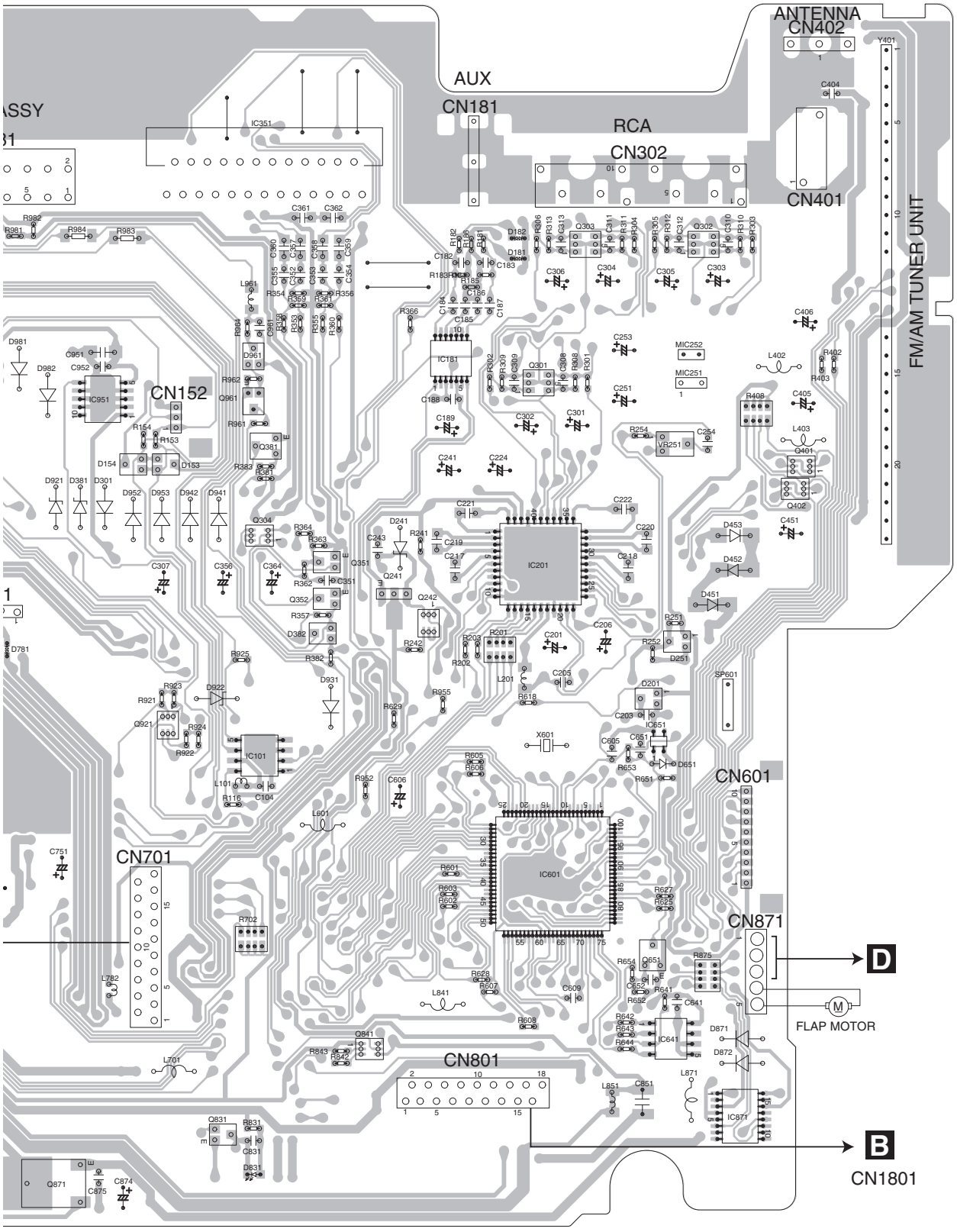
1. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
2. Viewpoint of PCB diagrams



A TUNER AMP UNIT



SIDE A


ANTENNA
CN402
AUX
CN181
RCA
CN302
CN401
FM/AM TUNER UNIT
CN152
CN701
CN601
CN871
CN801
CN1801
FLAP MOTOR
IC351
IC181
IC201
IC101
IC601
IC641
IC871
IC651
IC951
Q303
Q302
Q301
Q304
Q351
Q352
Q241
Q242
Q381
Q961
Q831
Q841
Q871
Q401
Q402
Q651
D781
D981
D982
D961
D962
D921
D381
D301
D952
D953
D942
D941
D154
D153
D922
D931
D382
D241
D453
D452
D451
D251
D201
D651
D871
D872
D831
X601
L961
L402
L403
L601
L701
L782
L841
L851
L871
L101
SP601
MIC252
MIC251
VR251
Y401
FRONT
60 70 80 90 100 110 120 130 140 150 160 170

A

B

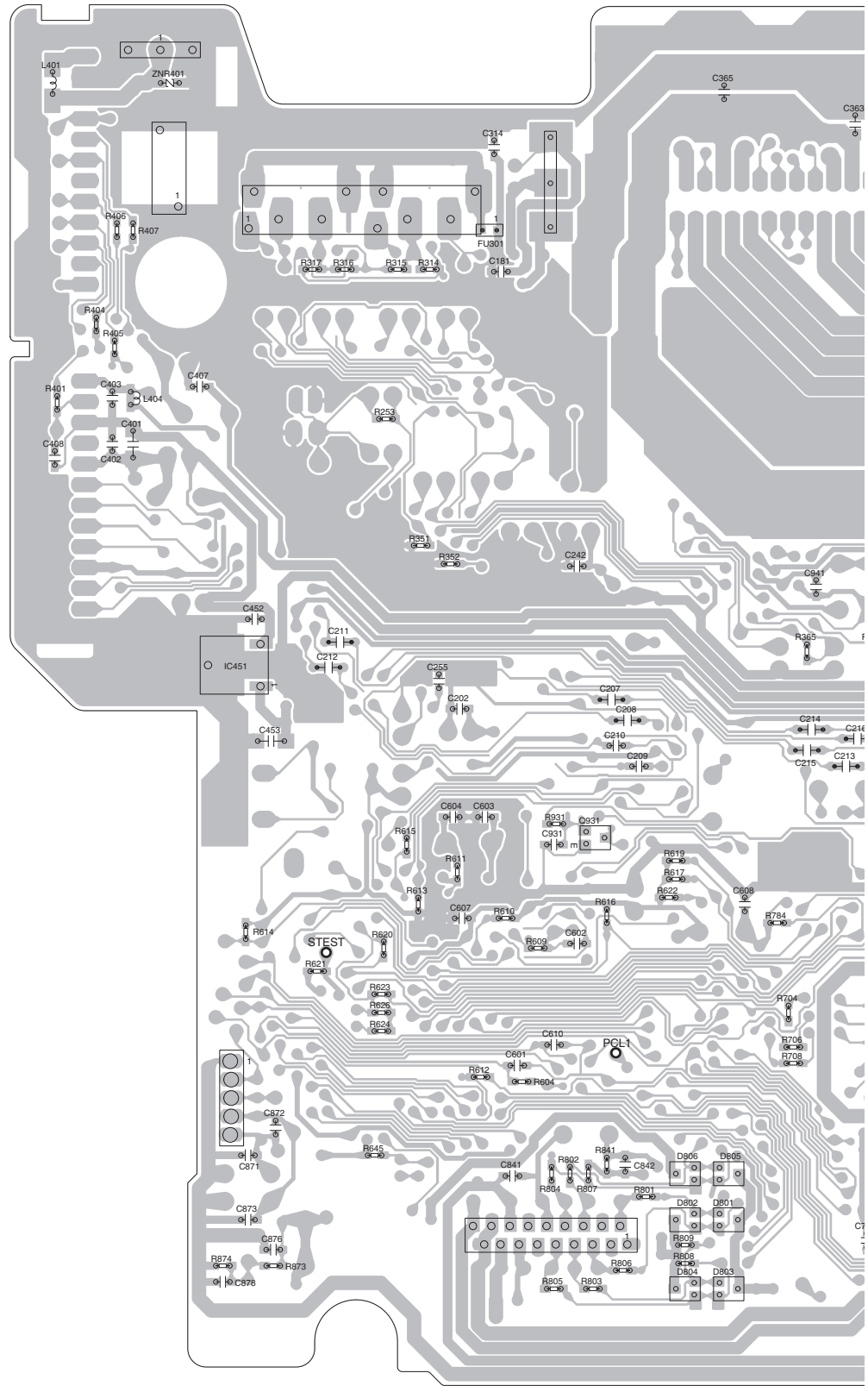
C

D

E

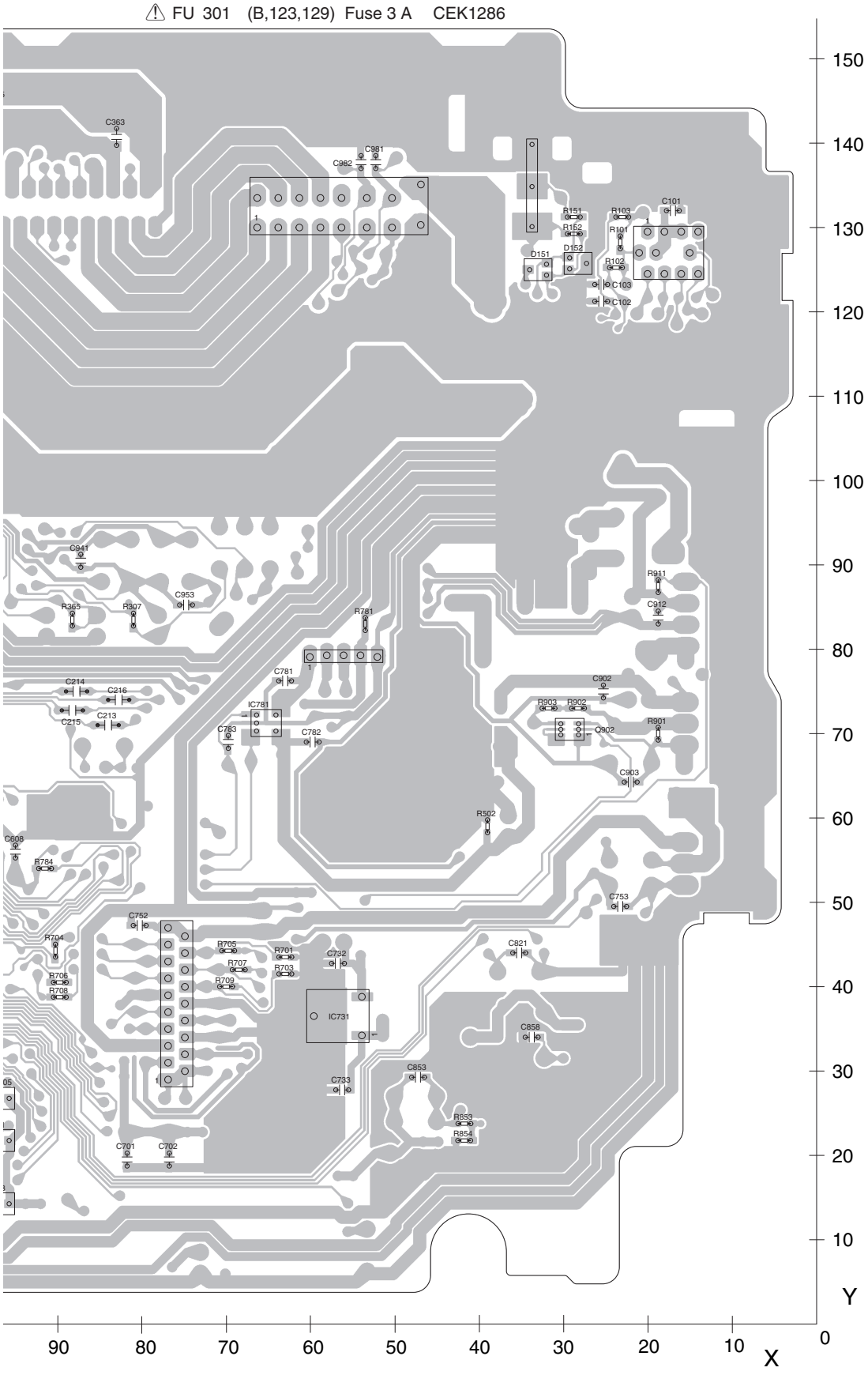
F

A TUNER AMP UNIT



SIDE B

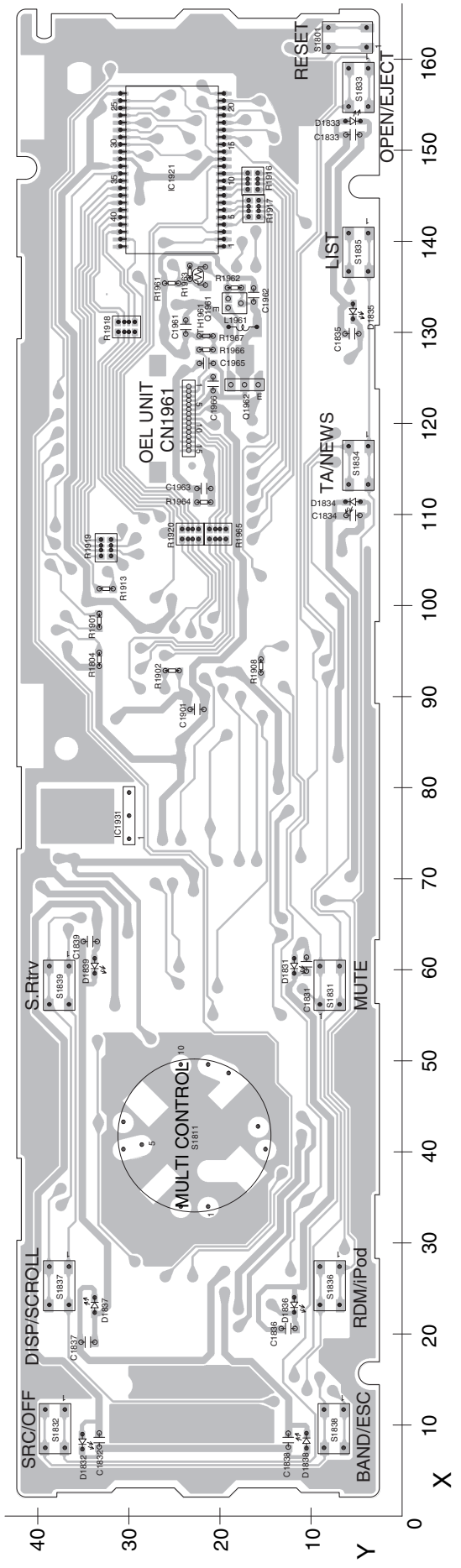
⚠ FU 301 (B,123,129) Fuse 3 A CEK1286



11.2 KEYBOARD UNIT

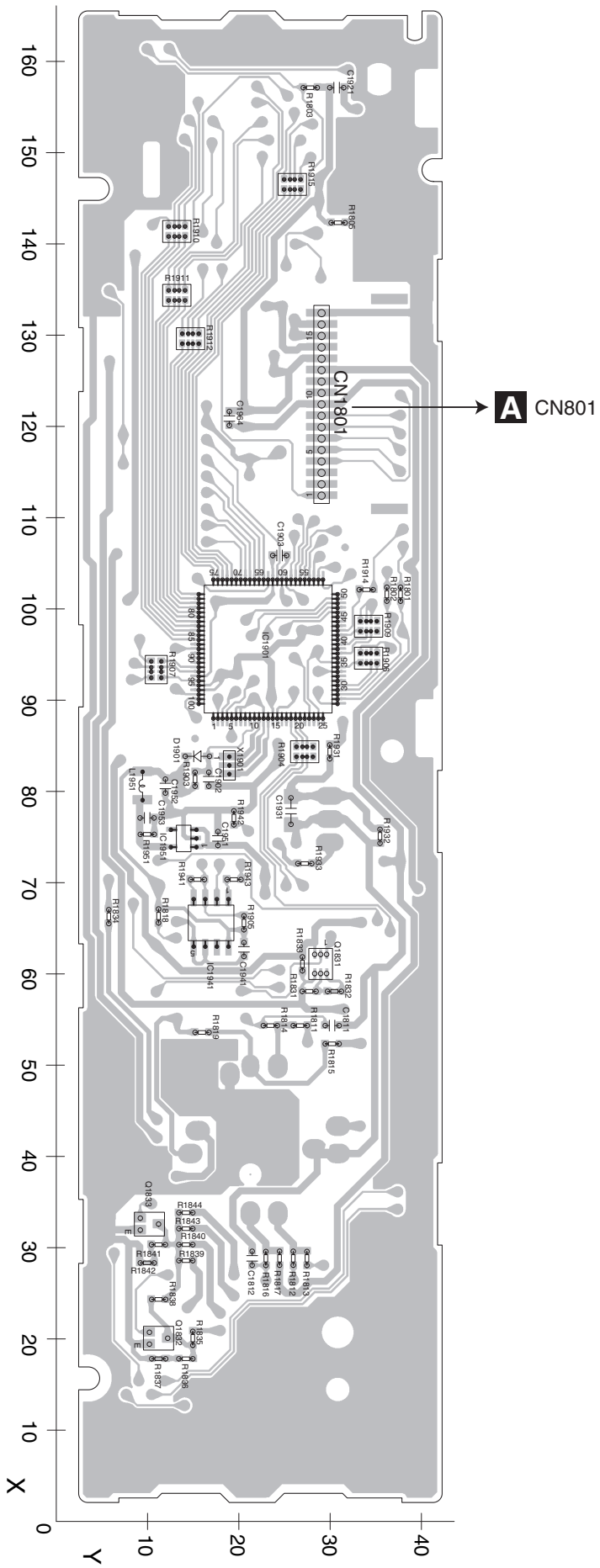
B KEYBOARD UNIT

SIDE A



B KEYBOARD UNIT

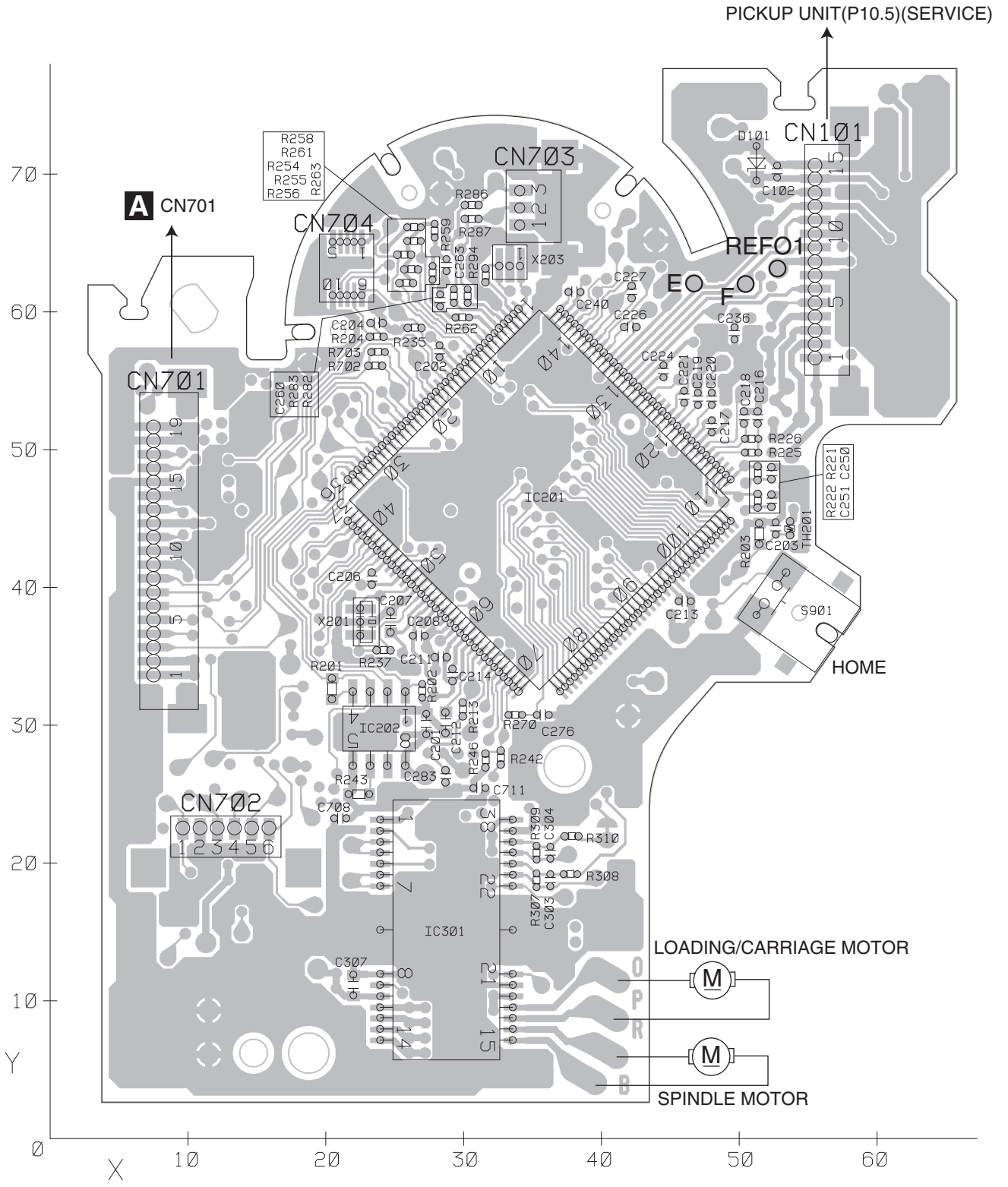
SIDE B



11.3 CD CORE UNIT(S10.5COMP2-iPod)

A

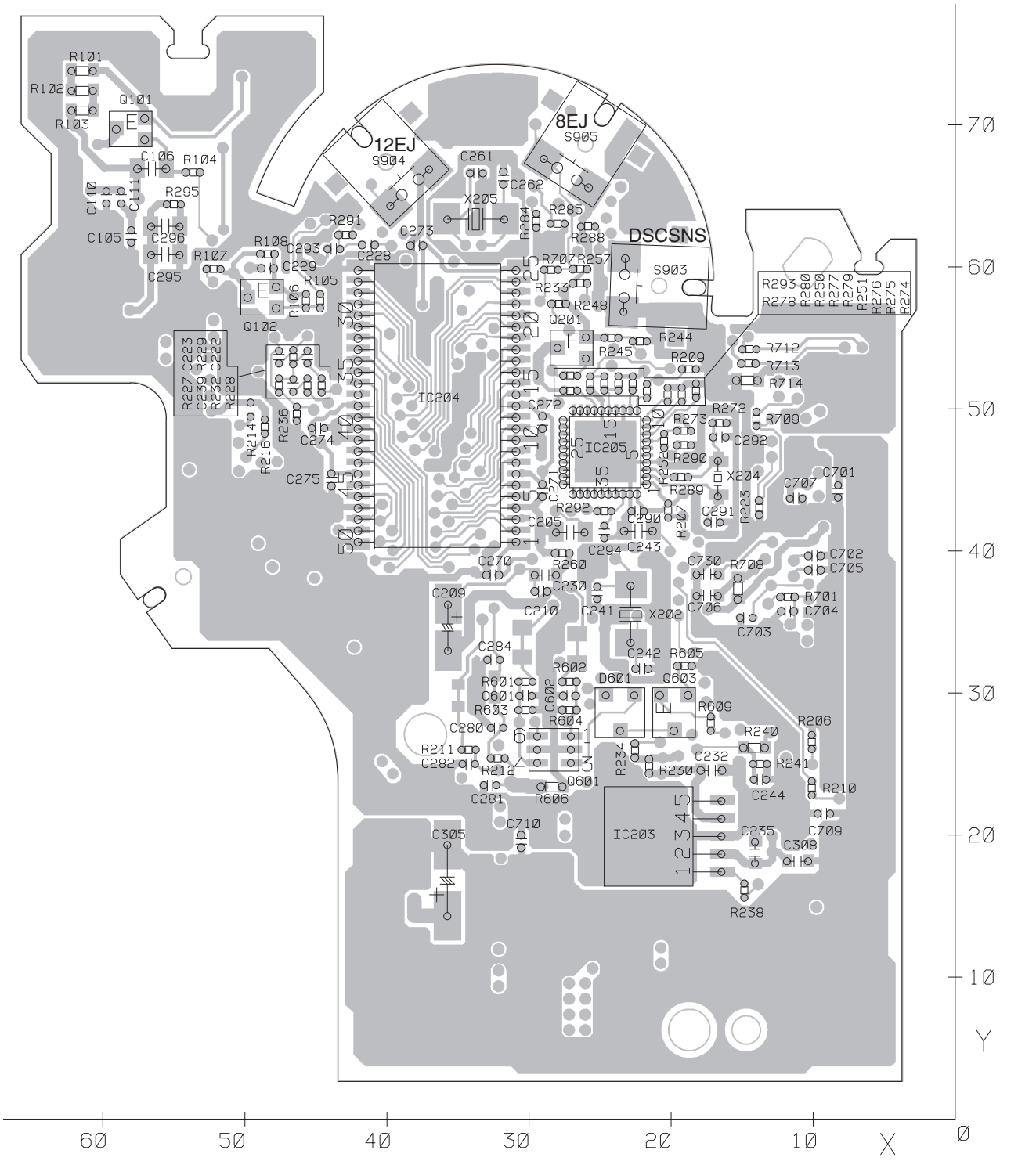
C CD CORE UNIT(S10.5COMP2-iPod) **SIDE A**



C

C CD CORE UNIT(S10.5COMP2-iPod)

SIDE B



11.4 SWITCH UNIT

A

B

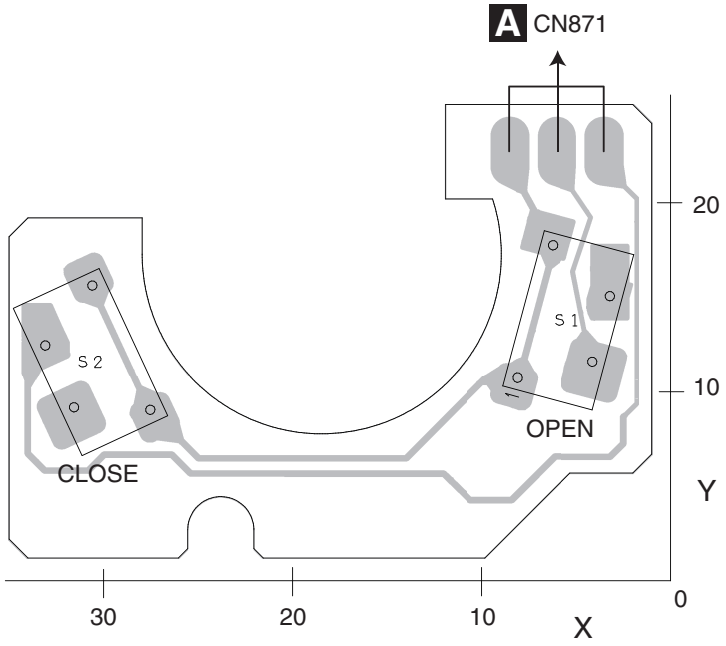
C

D

E

F

D SWITCH UNIT



12. ELECTRICAL PARTS LIST

NOTE:

- *Parts whose parts numbers are omitted are subject to being not supplied.*
- *The part numbers shown below indicate chip components.*

  Chip Resistor

  RS1/◯S◯◯◯J,RS1/◯◯S◯◯◯J

  Chip Capacitor (except for CQS.....)

  CKS....., CCS....., CSZS.....
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Meaning of the figures and others in the parentheses in the parts list.*

Example) IC 301 is on the point (face A, 91 of x-axis, and 111 of y-axis) of the corresponding PC board.

IC 301 (A, 91, 111) IC NJM2068V

Circuit Symbol and No. **Part No.**

Unit Number : CWN3147

Unit Name : Tuner Amp Unit

Unit Number :

Unit Name : Keyboard Unit

Unit Number : CWX3526

Unit Name : CD Core Unit

(S10.5COMP2-iPod)

Unit Number : CWS1389

Unit Name : Switch Unit

A

Unit Number : CWN3147

Unit Name : Tuner Amp Unit

MISCELLANEOUS

IC 101	(A,90,62) IC	HA12241FP
IC 181	(A,113,110) IC	NJM2794V
IC 201	(A,124,85) IC	PML017A
IC 351	(A,90,136) IC	PAL007C
IC 451	(B,152,82) IC	NJM2885DL1-33
IC 501	(A,54,59) Regulator IC	BD9781HFP
IC 601	(A,126,47) IC	PEG429B8
IC 651	(A,139,63) IC	S-80835CNNB-B8U
IC 731	(B,59,37) IC	NJM2885DL1-33
IC 781	(B,65,71) IC	R5523N001B
IC 851	(A,40,24) IC	NJM2360M
IC 871	(A,149,17) IC	BA6288FS
IC 911	(A,16,80) IC	NJM2388F84
Q 101	(A,19,118) Transistor	UMF23N
Q 241	(A,106,80) Transistor	2SD1767
Q 242	(A,111,78) Transistor	UMD3N
Q 301	(A,124,107) Transistor	IMH23
Q 302	(A,144,124) Transistor	IMH23
Q 303	(A,130,124) Transistor	IMH23
Q 304	(A,90,89) Transistor	UMD3N
Q 351	(A,98,85) Chip Transistor	DTC114EUA
Q 352	(A,98,81) Chip Transistor	DTC114EUA
Q 381	(A,91,100) Transistor	2SC3052-12
Q 401	(A,156,97) Transistor	UMH1N
Q 402	(A,156,94) Transistor	UMH1N
Q 651	(A,138,37) Transistor	2SC3052-12
Q 751	(A,15,55) Transistor	2SD2396
Q 752	(A,23,49) Transistor	UMD3N
Q 821	(A,43,43) Transistor	2SD1767
Q 822	(A,36,45) Transistor	UMD3N
Q 831	(A,85,15) Chip Transistor	DTC114EUA
Q 841	(A,103,26) Transistor	UMF23N
Q 851	(A,23,35) Transistor	2SD1760F5
Q 852	(A,28,30) Transistor	UMD3N
Q 871	(A,63,9) Transistor	2SD1760F5
Q 872	(A,50,8) Transistor	UMD3N
Q 901	(A,15,71) Transistor	2SD2396
Q 902	(B,29,71) Transistor	UMD3N
Q 921	(A,79,65) Transistor	UMX1N
Q 931	(B,111,63) Chip Transistor	DTC114EUA
Q 961	(A,89,105) Transistor	2SA1576A
D 181	(A,122,123) Diode	MALS068X
D 182	(A,122,125) Diode	MALS068X
D 201	(A,138,69) Diode Network	DA204U
D 241	(A,107,87) Diode	HZS12L(B1)
D 251	(A,141,76) Diode Network	DA204U
D 301	(A,71,92) Diode	1SS133
D 381	(A,68,92) Diode	HZS9L(A3)
D 382	(A,98,77) Diode	DAN202U
D 453	(A,148,89) Diode	1SR154-400
D 501	(A,43,90) Diode	1SR154-400
D 502	(A,44,62) Diode	RB060L-40
D 751	(A,22,52) Diode	HZS7L(C3)
D 801	(B,97,22) Diode	DAP202U
D 802	(B,102,22) Diode	DAN202U
D 803	(B,97,14) Diode	DAP202U
D 804	(B,102,14) Diode	DAN202U
D 805	(B,97,27) Diode	DAP202U
D 806	(B,102,27) Diode	DAN202U
D 821	(A,35,42) Diode	HZS11L(A1)

Circuit Symbol and No.		Part No.
D 831	(A,89,10) LED	SMLE12BC7T(NP)
D 851	(A,38,17) Diode	RB551V-30
D 852	(A,35,32) Diode	HZS11L(A1)
D 871	(A,149,27) Diode	1SS133
D 872	(A,149,24) Diode	1SS133
D 873	(A,53,9) Diode	HZS7L(B3)
D 901	(A,22,67) Diode	HZS6L(B1)
D 902	(A,24,93) Diode	MPG06G-6415G50
D 921	(A,65,92) Diode	HZS7L(C3)
D 922	(A,85,69) Diode	HZS7L(B2)
D 931	(A,99,68) Diode	MPG06G-6415G50
D 941	(A,85,91) Diode	MPG06G-6415G50
D 942	(A,81,91) Diode	MPG06G-6415G50
D 961	(A,89,111) Diode	DAN202U
D 981	(A,60,109) Diode	MPG06G-6415G50
D 982	(A,64,106) Diode	MPG06G-6415G50
ZNR401	(B,158,145) Surge Protector	IMSA-6801-01Y901
L 201	(A,122,71) Inductor	LCTAW2R2J2520
L 401	(B,170,145) Inductor	LCTAW220J2520
L 402	(A,154,109) Inductor	LAU1R0K
L 403	(A,157,100) Inductor	LAU2R2K
L 501	(A,44,69) Inductor	CTH1385
L 601	(A,98,53) Ferri-Inductor	LAU100K
L 781	(A,57,74) Inductor	CTF1713
L 782	(A,71,33) Inductor	CTF1379
L 841	(A,112,31) Ferri-Inductor	LAU100K
L 852	(A,30,21) Inductor	CTF1660
L 961	(A,89,118) Inductor	LCTAW2R2J2520
L 981	(A,35,109) Choke Coil 600 µH	CTH1280
X 601	(A,125,63) Crystal Resonator 15.000 MHz	CSS1653
VR251	(A,141,100) Semi-fixed 10 kohm(B)	CCP1229
⚠FU301	(B,123,129) Fuse 3 A	CEK1286
⚠	Fuse 10 A	YEK5001
MIC251	(A,143,109) Microphone	CPM1068
SP601	(A,147,68) Buzzer	CPV1062
Y 401	(A,167,148) FM/AM Tuner Unit	CWE2097

RESISTORS

R 101	(B,23,128)	RS1/16S620J
R 102	(B,24,125)	RS1/16S101J
R 103	(B,23,131)	RS1/16S101J
R 104	(A,20,120)	RS1/16S222J
R 105	(A,11,118)	RS1/16S181J
R 106	(A,14,118)	RS1/16S181J
R 107	(A,14,117)	RS1/16S223J
R 108	(A,11,117)	RS1/16S223J
R 113	(A,14,115)	RS1/10SR102J
R 114	(A,11,115)	RS1/10SR102J
R 115	(A,19,115)	RS1/16S562J
R 116	(A,87,56)	RS1/10SR102J
R 117	(A,17,115)	RS1/16S332J
R 151	(B,29,131)	RS1/16S102J
R 152	(B,29,129)	RS1/16S102J
R 181	(A,117,124)	RS1/16S181J
R 182	(A,114,124)	RS1/16S181J
R 183	(A,115,121)	RS1/16S223J
R 184	(A,118,121)	RS1/16S223J
R 201	(A,119,75)	RAB4C102J
R 202	(A,115,75)	RS1/16S101J
R 203	(A,117,75)	RS1/16S101J
R 242	(A,109,75)	RS1/16S182J
R 251	(A,141,78)	RS1/16S104J
R 252	(A,138,74)	RS1/16S104J
R 253	(B,134,109)	RS1/16S222J
R 254	(A,137,101)	RS1/10SR561J
R 301	(A,130,107)	RS1/16S390J
R 302	(A,118,107)	RS1/16S390J
R 303	(A,150,124)	RS1/16S390J
R 304	(A,136,124)	RS1/16S390J
R 305	(A,138,124)	RS1/16S390J
R 306	(A,124,124)	RS1/16S390J
R 307	(B,81,84)	RS1/16S102J
R 308	(A,129,107)	RS1/16S223J
R 309	(A,120,107)	RS1/16S223J
R 310	(A,149,124)	RS1/16S223J
R 311	(A,134,124)	RS1/16S223J
R 312	(A,140,124)	RS1/16S223J
R 313	(A,125,124)	RS1/16S223J
R 314	(B,129,125)	RS1/16S0R0J
R 316	(B,139,125)	RS1/16S0R0J
R 351	(B,130,95)	RS1/16S472J
R 352	(B,127,93)	RS1/16S472J
R 353	(A,95,115)	RS1/16S182J
R 354	(A,95,118)	RS1/16S272J
R 355	(A,98,115)	RS1/16S182J
R 356	(A,98,118)	RS1/16S272J
R 357	(A,98,79)	RS1/16S472J
R 358	(A,93,115)	RS1/16S182J
R 359	(A,95,117)	RS1/16S272J
R 360	(A,100,115)	RS1/16S182J
R 361	(A,98,117)	RS1/16S272J
R 362	(A,95,84)	RS1/16S103J
R 363	(A,97,87)	RS1/16S103J
R 364	(A,95,89)	RS1/16S331J
R 365	(B,88,84)	RS1/16S101J
R 366	(A,108,115)	RS1/16S103J
R 381	(A,91,96)	RS1/16S473J
R 382	(A,99,74)	RS1/16S223J
R 383	(A,91,97)	RS1/16S104J
R 401	(B,170,111)	RS1/16S681J
R 402	(A,160,110)	RS1/16S681J
R 403	(A,159,110)	RS1/16S681J
R 405	(B,164,117)	RS1/16S681J
R 406	(B,163,129)	RS1/16S681J
R 407	(B,162,129)	RS1/16S681J
R 408	(A,151,104)	RAB4C223J
R 502	(B,39,59)	RS1/10SR471J
R 503	(A,46,54)	RS1/16S3302F
R 504	(A,45,52)	RS1/16S333J
R 505	(A,43,54)	RS1/16S8201F
R 506	(A,45,55)	RS1/16S683J
R 507	(A,45,60)	RS1/16S823J
R 601	(A,113,47)	RS1/16S104J
R 602	(A,113,43)	RS1/16S104J
R 603	(A,113,45)	RS1/10SR102J
R 604	(B,119,37)	RS1/16S681J
R 605	(A,116,61)	RS1/16S472J
R 606	(A,116,59)	RS1/16S472J
R 607	(A,118,33)	RS1/16S104J

Circuit Symbol and No.		Part No.
R 608	(A,123,28)	RS1/16S104J
R 609	(B,118,51)	RS1/16S222J
R 610	(B,121,55)	RS1/16S473J
R 611	(B,126,60)	RS1/16S0R0J
R 612	(B,124,37)	RS1/16S472J
R 613	(B,131,56)	RS1/16S473J
R 614	(B,149,53)	RS1/16S104J
R 615	(B,132,63)	RS1/16S102J
R 616	(B,110,55)	RS1/16S104J
R 617	(B,103,59)	RS1/16S104J
R 618	(A,123,68)	RS1/10SR102J
R 619	(B,103,61)	RS1/16S104J
R 620	(B,134,51)	RS1/16S103J
R 621	(B,142,49)	RS1/16S473J
R 622	(B,103,57)	RS1/16S223J
R 623	(B,135,46)	RS1/16S104J
R 628	(A,117,34)	RS1/16S104J
R 629	(A,106,66)	RS1/16S473J
R 641	(A,140,31)	RS1/16S104J
R 651	(A,140,59)	RS1/16S183J
R 652	(A,137,33)	RS1/16S473J
R 653	(A,135,62)	RS1/10SR102J
R 654	(A,136,35)	RS1/10SR102J
R 701	(B,63,44)	RS1/16S473J
R 702	(A,89,39)	RAB4C472J
R 703	(B,63,42)	RS1/16S104J
R 704	(B,90,44)	RS1/16S221J
R 705	(B,70,44)	RS1/16S221J
R 706	(B,90,41)	RS1/16S221J
R 707	(B,69,42)	RS1/16S221J
R 708	(B,90,39)	RS1/16S221J
R 709	(B,70,40)	RS1/16S102J
R 751	(A,22,55)	RD1/4PU102J
R 784	(B,92,54)	RS1/16S103J
R 801	(B,106,24)	RS1/16S222J
R 802	(B,114,27)	RS1/16S222J
R 803	(B,112,14)	RS1/16S222J
R 804	(B,116,27)	RS1/16S222J
R 805	(B,116,14)	RS1/16S222J
R 806	(B,108,16)	RS1/16S222J
R 807	(B,112,27)	RS1/16S104J
R 808	(B,102,17)	RS1/16S104J
R 821	(A,41,39)	RS1/16S473J
R 822	(A,44,39)	RS1/16S1R0J
R 824	(A,41,47)	RS1/10SR561J
R 831	(A,89,16)	RS1/16S331J
R 842	(A,100,24)	RS1/10SR102J
R 843	(A,100,25)	RS1/16S472J
R 851	(A,48,24)	RD1/4PU272J
R 853	(B,42,24)	RS1/16S101J
R 854	(B,42,22)	RS1/16S101J
R 855	(A,39,29)	RS1/10SR821J
R 856	(A,36,27)	RS1/16S1R0J
R 857	(A,24,30)	RS1/10SR561J
R 871	(A,51,11)	RS1/10SR102J
R 875	(A,145,35)	RAB4C102J
R 901	(B,19,70)	RS1/16S223J
R 902	(B,28,73)	RS1/16S681J
R 903	(B,32,73)	RS1/16S681J
R 911	(B,19,88)	RS1/16S473J
R 921	(A,78,69)	RS1/16S104J
R 922	(A,81,64)	RS1/16S103J
R 923	(A,79,69)	RS1/16S473J
R 924	(A,82,64)	RS1/16S223J
R 925	(A,88,73)	RS1/16S472J
R 931	(B,116,65)	RS1/16S103J
R 961	(A,90,102)	RS1/10SR102J
R 962	(A,89,108)	RS1/16S472J
R 964	(A,88,114)	RS1/16S153J
R 983	(A,74,125)	RS1/4SA102J
R 984	(A,68,125)	RS1/4SA102J

CAPACITORS

C 101	(B,17,132)	CKSRYB104K16
C 102	(B,26,121)	CKSRYB102K50
C 103	(B,26,123)	CKSRYB102K50
C 181	(B,122,125)	CKSRYB104K16
C 182	(A,115,122)	CKSRYB472K50
C 183	(A,118,122)	CKSRYB472K50
C 184	(A,114,117)	CKSRYB105K10
C 185	(A,115,117)	CKSRYB105K10
C 186	(A,117,117)	CKSRYB105K10
C 187	(A,118,117)	CKSRYB105K10
C 188	(A,114,105)	CKSRYB104K16
C 189	(A,113,102)	CEJQ220M16
C 201	(A,126,75)	CEJQ470M16
C 202	(B,126,77)	CKSRYB104K16
C 203	(A,137,67)	CCSRCH470J50
C 205	(A,127,71)	CKSRYB474K10
C 206	(A,132,76)	CEJQ100M16
C 207	(B,110,78)	CKSRYB105K10
C 208	(B,108,76)	CKSRYB105K10
C 209	(B,107,71)	CKSRYB105K10
C 210	(B,109,73)	CKSRYB105K10
C 211	(B,139,85)	CKSRYB224K16
C 212	(B,140,82)	CKSRYB224K16
C 213	(B,84,71)	CKSRYB105K10
C 214	(B,88,75)	CKSRYB105K10
C 215	(B,88,73)	CKSRYB105K10
C 216	(B,83,74)	CKSRYB105K10
C 217	(A,114,84)	CKSQYB475K10
C 218	(A,135,84)	CKSQYB475K10
C 219	(A,112,88)	CKSQYB475K10
C 220	(A,137,88)	CKSQYB475K10
C 221	(A,115,91)	CKSQYB475K10
C 222	(A,135,92)	CKSQYB475K10
C 224	(A,119,97)	CEJQ100M16
C 241	(A,113,97)	CEJQ470M16
C 242	(B,113,93)	CKSRYB104K16
C 243	(A,104,87)	CKSRYB224K16
C 251	(A,135,105)	CEJQ100M16
C 252	(A,132,69)	CEJQNP100M16
C 253	(A,135,111)	CEJQ220M16
C 254	(A,145,100)	CKSRYB474K10
C 301	(A,129,102)	CEJQ100M16
C 302	(A,123,102)	CEJQ100M16
C 303	(A,146,120)	CEJQ100M16
C 304	(A,133,120)	CEJQ100M16
C 305	(A,140,120)	CEJQ100M16

Circuit Symbol and No.		Part No.
C 306	(A,126,120)	CEJQ100M16
C 307	(A,78,83)	CEJQ220M16
C 352	(A,95,121)	CKSRYB474K10
C 353	(A,98,121)	CKSRYB474K10
C 354	(A,100,121)	CKSRYB474K10
C 355	(A,93,121)	CKSRYB474K10
C 356	(A,85,83)	CEJQ330M10
C 357	(A,95,124)	CKSQYB474K16
C 358	(A,98,124)	CKSQYB474K16
C 359	(A,100,124)	CKSQYB474K16
C 360	(A,93,124)	CKSQYB474K16
C 361	(A,95,128)	CKSQYB225K10
C 362	(A,99,128)	CKSQYB225K10
C 364	(A,91,83)	CEJQ100M16
C 365	(B,97,144)	CKSRYB104K16
C 366	(A,54,118) 3 300 µF/16 V	CCH1486
C 402	(B,164,106)	CKSRYB103K50
C 403	(B,164,111)	CKSRYB103K50
C 404	(A,160,143)	CKSRYB103K50
C 405	(A,157,105)	CEJQ470M6R3
C 406	(A,157,115)	CEJQ101M16
C 408	(B,170,105)	CCSRCH101J50
C 451	(A,155,89)	CEJQ220M16
C 452	(B,148,87)	CKSRYB103K50
C 453	(B,147,74)	CKSYB475K16
C 501	(A,37,59) 100 µF/6.3 V	CCH1804
C 502	(A,42,79)	CEJQ221M16
C 503	(A,48,52)	CKSRYB221K50
C 504	(A,52,65)	CKSRYB105K16
C 506	(A,45,57)	CKSRYB102K50
C 507	(A,47,59)	CKSRYB104K16
C 603	(B,123,66)	CCSRCH180J50
C 604	(B,127,66)	CCSRCH180J50
C 606	(A,107,57)	CEJQ100M16
C 607	(B,126,55)	CKSRYB103K50
C 609	(A,128,32)	CCSRCH101J50
C 651	(A,137,62)	CKSRYB105K10
C 652	(A,138,34)	CKSRYB104K16
C 701	(B,82,20)	CKSRYB104K16
C 731	(A,57,45)	CEJQ220M16
C 732	(B,57,43)	CKSRYB103K50
C 733	(B,56,28)	CKSRYB474K10
C 751	(A,66,48)	CEJQ101M16
C 752	(B,80,47)	CKSRYB102K50
C 753	(B,23,50)	CKSRYB473K50
C 781	(B,63,76)	CKSRYB104K16
C 782	(B,60,69)	CKSRYB104K16
C 821	(B,35,44)	CKSRYB473K50
C 841	(B,120,27)	CKSRYB473K50
C 852	(A,51,19)	CEJQ470M25
C 853	(B,47,29)	CKSRYB103K50
C 854	(A,42,19)	CCSRCH331J50
C 855	(A,42,29)	CKSRYB104K16
C 856	(A,42,34)	CEJQ101M16
C 858	(B,34,34)	CKSRYB104K16
C 871	(B,149,29)	CCSRCH101J50
C 872	(B,146,32)	CKSRYB102K50
C 873	(B,149,22)	CCSRCH101J50
C 874	(A,73,7)	CEJQ220M16
C 875	(A,70,10)	CKSRYB104K16
C 877	(A,56,7)	CKSRYB224K16
C 901	(A,21,74)	CEHAR220M16
C 902	(B,25,75)	CKSRYB104K16
C 903	(B,22,64)	CKSRYB103K50
C 904	(A,31,86) 1 500 µ/16 V	CCH1201
C 911	(A,22,85)	CEHAS101M10
C 912	(B,19,84)	CKSRYB103K50
C 913	(A,18,98)	CEJQ101M16
C 931	(B,116,63)	CKSRYB105K16
C 941	(B,87,91)	CKSRYB473K50
C 961	(A,90,114)	CKSRYB104K16
C 981	(B,52,138)	CKSRYB104K16
C 982	(B,54,138)	CKSRYB104K16

B

Unit Number :
Unit Name : Keyboard Unit

MISCELLANEOUS

IC 1901	(B,96,23) IC	PEG432A
IC 1921	(A,148,25) IC	PD8177A
IC 1931	(A,77,35) IC	GP1UX31RK
IC 1951	(B,75,14) IC	S-1200B33-M5
Q 1833	(B,33,10) Transistor	DTC123JU
Q 1961	(A,133,18) Transistor	2SC4617
Q 1962	(A,126,17) Transistor	2SD1664
D 1831	(A,60,12) LED	SMLE12BC7T(NP)
D 1832	(A,8,35) LED	SMLE12BC7T(NP)
D 1833	(A,153,5) LED	SMLE12BC7T(NP)
D 1834	(A,111,5) LED	SMLE12BC7T(NP)
D 1835	(A,132,5) LED	SMLE12BC7T(NP)
D 1836	(A,23,12) LED	SMLE12BC7T(NP)
D 1837	(A,23,34) LED	SMLE12BC7T(NP)
D 1838	(A,8,11) LED	SMLE12BC7T(NP)
D 1839	(A,60,34) LED	SMLE12BC7T(NP)
D 1901	(B,84,16) Diode	1SS355
L 1951	(B,81,10) Inductor	CTF1617
L 1961	(A,131,18) Inductor	CTF1617
TH1961	(A,136,22) Thermistor	CCX1037
X 1901	(B,83,19) Ceramic Resonator 16.000 MHz	CSS1616
S 1801	(A,162,6) Push Switch	CSG1155
S 1811	(A,42,23) Switch (MULTI CONTROL)	CSX1120
S 1831	(A,58,8) Push Switch	CSG1155
S 1832	(A,10,38) Push Switch	CSG1155
S 1833	(A,157,5) Push Switch	CSG1155
S 1834	(A,115,5) Push Switch	CSG1155
S 1835	(A,139,5) Push Switch	CSG1155
S 1836	(A,25,8) Push Switch	CSG1155
S 1837	(A,25,38) Push Switch	CSG1155
S 1838	(A,10,8) Push Switch	CSG1155
S 1839	(A,58,38) Push Switch	CSG1155

RESISTORS

R 1801	(B,102,38)	RS1/16S222J
R 1802	(B,102,36)	RS1/16S222J
R 1803	(B,157,28)	RS1/16S333J
R 1811	(B,54,27)	RS1/16S103J
R 1812	(B,29,26)	RS1/16S333J
R 1813	(B,29,28)	RS1/16S103J

Circuit Symbol and No.		Part No.
R 1814	(B,54,24)	RS1/16S102J
R 1815	(B,52,30)	RS1/16S332J
R 1816	(B,29,23)	RS1/16S102J
R 1818	(B,66,11)	RS1/16S103J
R 1819	(B,54,16)	RS1/16S222J
R 1833	(B,61,27)	RS1/16S0R0J
R 1834	(B,66,6)	RS1/16S821J
R 1835	(B,20,15)	RS1/16S821J
R 1838	(B,24,11)	RS1/16S0R0J
R 1839	(B,29,14)	RS1/16S681J
R 1840	(B,30,14)	RS1/16S681J
R 1841	(B,30,11)	RS1/16S271J
R 1843	(B,32,14)	RS1/16S681J
R 1844	(B,34,14)	RS1/16S681J
R 1901	(A,98,33)	RS1/16S103J
R 1902	(A,93,25)	RS1/16S473J
R 1903	(B,81,15)	RS1/16S154J
R 1904	(B,84,27)	RAB4CQ102J
R 1905	(B,66,21)	RS1/16S104J
R 1906	(B,95,34)	RAB4CQ473J
R 1907	(B,93,11)	RAB4CQ102J
R 1908	(A,93,16)	RS1/16S221J
R 1909	(B,98,34)	RAB4CQ473J
R 1910	(B,141,13)	RAB4CQ101J
R 1911	(B,134,13)	RAB4CQ101J
R 1912	(B,130,15)	RAB4CQ101J
R 1913	(A,102,33)	RS1/16S101J
R 1914	(B,102,34)	RS1/16S101J
R 1915	(B,147,26)	RAB4CQ101J
R 1916	(A,147,16)	RAB4CQ101J
R 1917	(A,144,16)	RAB4CQ101J
R 1918	(A,131,30)	RAB4CQ101J
R 1919	(A,106,33)	RAB4CQ101J
R 1920	(A,108,23)	RAB4CQ101J
R 1931	(B,84,30)	RS1/16S101J
R 1932	(B,75,36)	RS1/16S103J
R 1933	(B,72,27)	RS1/16S2R2J
R 1951	(B,75,10)	RS1/16S222J
R 1961	(A,135,25)	RS1/16S333J
R 1962	(A,135,18)	RS1/16S183J
R 1963	(A,137,23)	RS1/16S563J
R 1964	(A,111,22)	RS1/16S392J
R 1965	(A,108,20)	RAB4CQ101J
R 1966	(A,128,22)	RS1/16S5101D

CAPACITORS

C 1901	(A,89,23)	CKSRYB103K50
C 1902	(B,81,17)	CKSRYF104Z25
C 1903	(B,106,25)	CKSRYB103K50
C 1921	(B,157,31)	CKSRYB103K50
C 1931	(B,78,26)	CKSYB106K6R3
C 1951	(B,75,18)	CKSRYB105K10
C 1952	(B,77,10)	CKSRYB105K10
C 1953	(B,81,12)	CKSRYB105K10
C 1963	(A,113,22)	CKSRYB104K16
C 1964	(B,121,19)	CKSRYB104K16
C 1965	(A,127,22)	CKSRYB104K25
C 1966	(A,124,21)	CKSRYB104K25

C

Circuit Symbol and No.		Part No.

Unit Number : CWX3526
Unit Name : CD Core Unit
(S10.5COMP2-iPod)

MISCELLANEOUS

IC 201	(A,36,46)	IC	PE5611B
IC 202	(A,24,30)	IC	S-93C66BD0I-J8
IC 205	(B,25,47)	IC	341S2094
IC 301	(A,29,15)	IC	BA5839FP
Q 101	(B,58,70)	Transistor	2SA1577
Q 102	(B,49,58)	Chip Transistor	2SB1689
Q 201	(B,27,54)	Transistor	2SA1577
X 201	(A,23,38)	Ceramic Resonator 16.934 MHz	CSS1603
X 204	(B,17,45)	Oscillator 32.768 kHz	CSS1735
X 205	(B,34,63)	Oscillator 48.000 MHz	CSS1753
S 901	(A,55,37)	Switch(HOME)	CSN1067
S 903	(B,20,59)	Switch(DSCSNS)	CSN1067
S 904	(B,41,68)	Switch(12EJ)	CSN1068
S 905	(B,25,70)	Switch(8EJ)	CSN1068

RESISTORS

R 101	(B,61,74)	RS1/10SR2R4J
R 102	(B,61,72)	RS1/10SR2R4J
R 103	(B,61,71)	RS1/10SR2R7J
R 104	(B,54,67)	RS1/16SS222J
R 105	(B,45,58)	RS1/16SS102J
R 107	(B,52,60)	RS1/16SS105J
R 201	(A,20,33)	RS1/16S472J
R 202	(A,27,33)	RS1/16SS473J
R 203	(A,51,44)	RS1/16S473J
R 204	(A,24,58)	RS1/16SS221J
R 206	(B,10,27)	RS1/16SS104J
R 210	(B,10,23)	RS1/16SS102J
R 214	(B,50,50)	RS1/16SS472J
R 216	(B,49,49)	RS1/16SS472J
R 221	(A,51,48)	RS1/16SS103J
R 222	(A,51,46)	RS1/16SS103J
R 223	(B,14,43)	RS1/16SS473J
R 225	(A,51,50)	RS1/16SS103J
R 226	(A,51,51)	RS1/16SS393J
R 227	(B,48,52)	RS1/16SS562J
R 228	(B,45,52)	RS1/16SS122J
R 229	(B,47,54)	RS1/16SS472J
R 230	(B,22,25)	RS1/16SS0R0J
R 232	(B,46,52)	RS1/16SS122J
R 233	(B,26,59)	RS1/16SS103J
R 234	(B,23,26)	RS1/16SS473J
R 235	(A,26,59)	RS1/16SS473J
R 237	(A,24,35)	RS1/16SS151J
R 240	(B,14,26)	RS1/16S473J
R 241	(B,14,25)	RS1/16SS103J
R 243	(A,22,25)	RS1/16S0R0J
R 244	(B,22,55)	RS1/16SS473J
R 250	(B,25,52)	RS1/16SS101J
R 251	(B,22,51)	RS1/16SS101J
R 252	(B,21,48)	RS1/16SS101J
R 254	(A,26,64)	RS1/16SS104J
R 255	(A,26,63)	RS1/16SS104J
R 256	(A,26,62)	RS1/16SS104J

Circuit Symbol and No.		Part No.
R 259	(A,28,66)	RS1/16SS0R0J
R 261	(A,26,65)	RS1/16SS104J
R 262	(A,30,60)	RS1/16SS0R0J
R 263	(A,28,63)	RS1/16SS0R0J
R 273	(B,19,48)	RS1/16SS103J
R 274	(B,18,51)	RS1/16SS104J
R 275	(B,19,51)	RS1/16SS104J
R 276	(B,20,51)	RS1/16SS104J
R 277	(B,24,52)	RS1/16SS103J
R 278	(B,27,51)	RS1/16SS1003D
R 279	(B,23,52)	RS1/16SS104J
R 282	(A,30,61)	RS1/16SS240J
R 283	(A,29,61)	RS1/16SS240J
R 284	(B,30,63)	RS1/16SS153J
R 285	(B,28,63)	RS1/16SS153J
R 289	(B,19,45)	RS1/16SS0R0J
R 291	(B,43,62)	RS1/16SS272J
R 292	(B,25,43)	RS1/16SS221J
R 293	(B,27,52)	RS1/16SS472J
R 294	(A,32,63)	RS1/16SS471J
R 295	(B,55,64)	RS1/16SS103J
R 307	(A,35,19)	RS1/16SS183J
R 308	(A,38,19)	RS1/16SS183J
R 309	(A,35,21)	RS1/16SS183J
R 310	(A,38,22)	RS1/16SS183J
R 601	(B,30,31)	RS1/16SS0R0J
R 602	(B,27,31)	RS1/16SS0R0J
R 606	(B,28,23)	RS1/16S0R0J
R 701	(B,12,37)	RS1/16SS221J
R 702	(A,24,56)	RS1/16SS221J
R 708	(B,15,37)	RS1/16S0R0J
R 712	(B,15,54)	RS1/16SS0R0J
R 713	(B,15,53)	RS1/16SS0R0J

CAPACITORS

C 106	(B,57,67)	CKSQYB475K6R3
C 201	(A,27,30)	CKSRYB104K16
C 202	(A,28,57)	CKSSYB104K10
C 204	(A,24,59)	CKSSYB103K16
C 205	(B,27,41)	CKSQYB475K6R3
C 206	(A,23,41)	CKSSYB104K10
C 207	(A,25,38)	CKSRYB104K16
C 209	(B,36,35)	CEVW220M6R3
C 210	(B,29,37)	CKSSYB104K10
C 211	(A,28,35)	CKSSYB104K10
C 212	(A,29,30)	CKSRYB104K16
C 213	(A,46,39)	CKSSYB104K10
C 214	(A,29,34)	CKSSYB104K10
C 216	(A,51,52)	CKSSYB332K50
C 217	(A,48,52)	CKSSYB104K10
C 218	(A,50,52)	CKSSYB473K10
C 219	(A,47,54)	CKSSYB104K10
C 220	(A,48,54)	CKSSYB182K50
C 221	(A,46,54)	CKSSYB104K10
C 222	(B,46,54)	CCSSCH560J50
C 223	(B,48,54)	CCSSCH4R0C50
C 224	(A,45,56)	CKSSYB104K10
C 226	(A,42,59)	CCSSCH680J50
C 227	(A,42,61)	CCSSCH470J50
C 228	(B,41,62)	CKSSYB103K16
C 229	(B,48,60)	CKSSYB104K10
C 236	(A,50,58)	CKSSYB104K10
C 239	(B,47,52)	CCSSCH220J50
C 240	(A,38,61)	CKSSYB104K10
C 243	(B,22,41)	CKSQYB475K6R3
C 250	(A,52,48)	CKSSYB102K50
C 251	(A,52,46)	CKSSYB102K50
C 260	(A,28,61)	CKSSYB104K10
C 261	(B,34,67)	CCSSCH8R0D50
C 262	(B,32,66)	CCSSCH8R0D50
C 290	(B,22,43)	CKSSYB104K10
C 291	(B,17,42)	CCSSCH5R0C50
C 292	(B,17,48)	CCSSCH5R0C50
C 293	(B,44,61)	CKSSYB102K50
C 294	(B,25,41)	CKSSYB103K16
C 295	(B,56,61)	CKSQYB106K6R3
C 296	(B,56,63)	CKSQYB106K6R3
C 303	(A,36,19)	CKSSYB472K25
C 304	(A,36,21)	CKSSYB223K16
C 307	(A,22,11)	CKSRYB104K16
C 308	(B,11,18)	CKSRYB105K10
C 703	(B,15,35)	CCSSCH101J50
C 704	(B,12,36)	CKSSYB102K50
C 711	(A,31,25)	CKSSYB104K10

D

Unit Number : CWS1389
Unit Name : Switch Unit

MISCELLANEOUS

S 1	(A,6,14) Switch(OPEN)	CSN1051
S 2	(A,32,12) Spring Switch(CLOSE)	CSN1052

Miscellaneous Parts List

	Pickup Unit(P10.5)(Service)	CXX1942
M 1	Motor Unit(SPINDLE)	CXC7134
M 2	Motor Unit(LOADING/CARRIAGE)	CXC4026
	Motor Unit(FLAP)	XXA7400